

THE MEDICAL AND SURGICAL REPORTER

No. 1814.

PHILADELPHIA, DECEMBER 5, 1891.

VOL. LXV.—No. 23.

CLINICAL LECTURE.

SCOPE OF ORTHOPEDICS—THE FORMS OF CLUB-FOOT—TENOTOMY.*

BY H. AUGUSTUS WILSON, M. D.,

CLINICAL LECTURER ON ORTHOPEDIC SURGERY IN
THE JEFFERSON MEDICAL COLLEGE, PHILA-
DELPHIA.

SCOPE OF ORTHOPEDICS.

Gentlemen:—By way of introduction I desire to say a few words in reference to the word orthopedic. Unless we understand thoroughly what is embraced in this term, we cannot entertain a clear idea of the subject we have before us. The first part of the word is derived from the Greek *Orthos*, straight, or preferably, to make straight. This is plain thus far, but unfortunately there is a confusion in the minds of many as to the derivation of the final portion of the word. It is supposed by some to be derived from the Latin, *pes*, a foot, thus limiting the meaning of the word to the narrow scope of making a deformed foot straight. The correct derivation is to take it from the Greek, *paiz*, a child, therefore making the word mean literally "to make straight a child," presuming that the child is deformed.

Now let us think for a moment of those diseases which especially give rise to deformity in children, namely rickets, tuberculosis, paralysis, etc. Were we to confine orthopedics simply to the correcting of deformity already existing in children, we would limit its usefulness to a very narrow scope. Many of the deformities of children require orthopedic treatment during adult life. Therefore, orthopedists define orthopedics in the broadest sense thus: Orthopedic surgery is that branch of medicine which has for its object the prevention and correction of chronic and progressive bodily

deformities. Thus enters into the subject the important feature of rational medicine, the prevention of disease, and as well the prevention of deformity. This necessitates a familiarity with those conditions which will produce deformity, and in our clinics we will from time to time give our attention to this part of the subject. There are numerous deformities that although congenital are not classed as orthopedic cases. Cleft palate for example is a congenital deformity, but it is a condition which is not a progressive deformity, and can not be corrected or prevented by other than surgical measures. We must remember that the definition embraces *progressive* deformities. It is the prevention of progress as well as the cure of disease that orthopedic surgery has for its object. It is within the knowledge of your preceptors that patients suffering with diseases of the eyes were sent to the optician by their physicians to have their optical defects remedied. This practice was continued until the oculists occupied the field, recognizing the injury that was being done to the patients, by men without any medical knowledge whatever, and now the oculist prescribes and the optician makes the necessary glasses. What would you think of a doctor who would send to an instrument maker a patient with a fractured limb with instructions to please apply a proper splint for this broken bone; or of a physician who would send a fever patient to a pharmacist with the request that he give him some drug to allay his fever? You say this would be absurd. Yet this has been the practice with orthopedic cases which have been sent to mechanics for the purpose of having some form of brace applied. In many instances the braces so procured concealed rather than corrected the deformity. The mechanic has been driven to occupying the false position of in reality practicing medicine without a science, because of the ignorance of physicians of that most important subject mechanico-therapeutics. The mechanic is thoroughly skilful in

*Two lectures; the second to appear in the next issue of the Reporter.

the manufacture, adaptation and fitting of braces and orthopedic appliances, but his training has not been that of a physician and he is not therefore fitted to prescribe an appliance for a disease any more than the optician or the apothecary.

The entire absence of knowledge on his part, of pathology, etiology, etc., renders him liable to apply braces for cosmetic purposes only, in other words to correct the appearance of a deformity rather than to apply mechanico-therapy to the correction or prevention of the deformity or the disease or condition tending to produce a deformity.

I consider it as important that you should have a knowledge of the principles of mechanics, as that you should know what drugs to prescribe. I would urge upon you a strict, careful study of progressive deformities, for, in order that you succeed in treatment of orthopedic cases, it is necessary that you start at the initial stage of the management of the various conditions, namely, the *prevention* of the trouble. I feel that it will be impossible for me in this course of lectures to follow out a systematic course, beginning with one subject and following it to the end, simply because the patients are often sent to us in the stage of their disease when it is important for you to see them at once. If I withheld the case until the appropriate time had arrived in the course of lectures, I should deprive you of seeing the case when most instructive, and would cause you to lose much valuable information. To show you that orthopedic surgery treats not only of deformed feet, but of other equally important subjects, I shall begin with the feet and draw you away gradually to the other portions of the body. A strong, firm foundation is necessary upon which to build any superstructure, and therefore we begin with the feet. Let us see how we can take a club-foot, and by mechanical means combined with surgery and therapeutical measures correct the condition. There are various kinds of deformed feet.

FORMS OF CLUB-FOOT.

First, we have the *Equinus*, derived from the Latin *Equis*, a horse, and indicating that in this form the patient walked like a horse. The foot is so deformed, that it is extended in a more or less straight line, the patient walking on the tip of its toes or on the ends of the metatarsus. Now suppose the patient's foot was in the reverse condition, the toes up and heel down, then the patient walks upon the os calcis. Therefore this form of club-foot is called *calcaneum*. Although these

two varieties are among the rarer forms of the disease, still they exist and must be recognized. Now we have mentioned the bending forward and back, let us consider the bending to either side. If the patient walks on the outside of the foot, the condition is called *varus*. In this condition the foot is turned in. The reverse of this is *valgus*, that is the foot is turned outwards and the patient walks on the inner surface of the foot. The condition produced in the Chinese woman's foot has taught us another variety which we occasionally see produced, not by fashion, as in the case of the Chinese ladies but by disease. This form is the condition in which the normal arch of the foot is increased, and the anterior and posterior pillars of the arch are brought closer together, and there results a cavity of greater magnitude than normal. This is called *cavus*. If we have an increase of the arch, it would be natural to suppose that there may be also a diminution of the arch. If the arch gives away we have a condition of flattening, and this is called *plan-taris* or flat-foot. As we proceed in our work, and bring cases before you, you will see that there is no such thing as a simple straightforward disease or deformity with no variations. Some of the names I have given you designate conditions which are known by other names, and often they are combined to describe mixed cases, but I will avoid confusing you by deferring reference to these mixed varieties until I show you cases.

This morning I purpose starting with the cases we have on hand, and I will show you this girl who came to us recently, presenting *valgus* form of club-foot. I must ask you to form in your own minds a conception of what a normal foot is, and I may astonish you when I say that I doubt if there is anything of the kind in this room to-day, as the shoemaker has deformed all of the feet here. In this girl the foot is everted, and the patient walks upon its inner surface. In this second case you see an exaggeration of this same condition. You will notice how the great toe is infringed upon and the other toes pushed out. In contra-distinction to these two cases of *valgus*, the treatment of which I will postpone to another time, I wish to show you another variety of club-foot occurring in an infant aged two months. You will observe here a congenital club-foot of the *varus* variety. If this patient could walk, it would be upon the outside of the foot. There is something holding this foot in this position which prevents a return to the normal posture. There is here a want of correlation of muscular force. If one side of the muscles

of a foot is paralyzed or so placed that the muscles cannot act, there will be a resultant deformity from a want of correlation of muscular action. If a man while rowing makes use of one oar more than of the other, the boat is turned. Just so it is in this condition. Now if we can correct the defect in the muscular action, the deformity will be overcome, as you see has been done in this boy, who was born with *varus* of one side, but who is now approaching a normal condition. In this baby's case, on whom we will operate to-day, the difficulty is that certain muscles are tight and contracted while others are relaxed. The anterior tibial is contracted, and I find its tendon firm and unyielding as soon as I endeavor to correct the foot. This if left alone will counteract all efforts to overcome the deformity and the bones will become ossified in their deformed positions. In addition the tendo achilles feels like a taunt steel wire, and it is adding to the defect. Bear in mind that the operation is not to be done simply to correct the deformity but to put the muscles into a proper relationship, and to place the joints in a normal mechanical position, so as to favor the development of a natural condition of the foot. This second baby is three months old and has double *varus*. The earlier the patient is placed under manipulation and treatment the better the result. The longer we wait, the more thoroughly the bones of the foot become ossified, and consequently the more difficult is the correction. I believe that the first day is none too early to begin manipulative and restrictive treatment of a congenital club-foot, and further, that by beginning thus early, resort to surgical proceedings is less frequently necessary.

TENOTOMY.

The operation of tenotomy for the correction of club-foot is a comparatively modern procedure. It was performed, I believe for the first time, by Sartorius in 1812.

Delpech in 1816, divided the tendo achilles by an open wound, but it is recorded that the wound did not heal for three months.

It remained for Louis Stromeyer to perform the operation subcutaneously, which he did for the first time in 1831.

I know of no better words to describe subcutaneous tenotomy than by saying it is made by a small hole in the skin, the better to conceal the unknown and often extensive amount of destruction beneath.

It is performed by a sharp pointed tenotome perforating the skin and opening a way to the tendon; upon withdrawal a blunt pointed

tenotome is introduced and the tendon divided by a sawing motion. No attempt should be made to use force, for the tenotomes are entirely too delicate to permit of it. I have seen tenotomes broken many times and great difficulty was experienced in finding the broken ends.

The various methods of procedure recommended by advocates of each method are first, the simple transverse incision in which the tendon is divided at a right angle to its length. Transversely oblique incisions are made by drawing the knife from below upwards or from above downwards through the tendon as it is being cut.

It may be divided longitudinally obliquely by entering the tenotome at a point one inch and a half to two inches above the os calcis and passing the knife under the skin to the distal insertion of the tendo achilles. The incision begins on the side opposite to that of the skin puncture and in this oblique position is gradually withdrawn, cutting the tendon as it passes.

Then a tendon may be cut from within outwards or from without inwards. I prefer the former, for then you have the movement under the skin to guide the progress of the knife.

While I frequently use the subcutaneous method you will, I think, perceive from the definition I have given, that I do not favor it, on account of the uncertainty which necessarily must exist as to the extent of the severance of tissues other than of the tendon.

Modern aseptic methods has made it possible to resort to procedures that are accurate in the incision as well as in the results obtained, and now open wound tenotomy is freely and safely performed. Professor W. W. Keen has originated an accurate method of tenotomy through an open wound, which I have found of the greatest service. It consists of the longitudinal slitting of a tendon through its middle, and at the point of the origin of the incision to transversely divide one-half of the tendon and at the other end of the cut to divide the other half. The divided ends being retracted to the required extent, the portions in contact are sutured and thus held in exact position, and the skin wound stitched.

I invariably resort to the requisite mechanical appliances to over-correct after tenotomy, so that plasma which, is deposited, may unite the divided ends of the tendon and avoid the necessity of after stretching, which tends to attenuate the newly formed tendon.

In the correction of a club-foot, divide by clean incision at one sitting all soft structures that restrict the complete correction, rather than depend upon the possibility of their yielding or tearing upon the application of force. If the case before us requires it I shall not hesitate to freely divide the anterior tibial, plantar fascia, all the tendons of the flexors of the toes and the tendo achilles, but I invariably reserve the latter for the last, to increase the hold upon the foot at the time of correction.

COMMUNICATIONS.

A NEW APPARATUS FOR DETECTING AND MEASURING THE ANOMALIES OF THE OCULAR MUSCLES.*

BY S. D. RISLEY, M. D.,

LECTURER ON OPHTHALMOLOGY IN THE UNIVERSITY OF PENNSYLVANIA; ATTENDING SURGEON AT THE WILL'S EYE HOSPITAL; PROFESSOR OF OPHTHALMOLOGY, PHILADELPHIA POLYCLINIC, PHILADELPHIA.

The renewed interest which of late years has been awakened in the study of the ocular balance has served to demonstrate the necessity for some form of apparatus which would facilitate the work of the surgeon, and at the same time secure trustworthy measurements of the relative strength of the ocular muscles. The use of the series of prisms ordinarily found in our sets of test-glasses, was notoriously tedious, fatiguing both to patient and surgeon, and withal variable in results, so that the temptation to avoid a wearisome task constantly presented itself, since at the end there was placed but little confidence in the result.

It is not my purpose to discuss here the anomalies of the ocular muscles, but to describe briefly an instrument devised to meet the indications suggested above. In passing it may be said that not infrequently muscular defects parade themselves in a manner to deceive the observer, as to the real muscles at fault, or the defect may be wholly or in part concealed, but nevertheless the cause of ocular disturbance or reflected symptoms. To detect these latent disorders, or to unravel successfully the vagrant and confusing movements of the eyes, it is helpful to have the patient as far

as possible in a position of general muscular rest, and the eyes placed under conditions which remove the ordinary inducements to binocular vision. It is furthermore desirable that these conditions shall be simple and readily understood, since for the most part our patients are not trained to habits of accurate observation. Then, too, the persons suffering from these anomalies are apt to be "nervous," are afflicted with headache, particularly with occipital pain, which is aggravated by any protracted examination. The ocular muscles become irritable under the effort to measure their relative strength, so that the more persistent the trial, the less trustworthy are the results reached. Nothing could be more annoying to the eyes of an already suffering patient, than the heavy trial-frame resting upon the nose, and the placing and replacing in wearisome successions of the cumbersome prisms of the test-set. To avoid these annoyances and at the same time meet the requirements for a rapid and careful determination of any existing anomaly I have had constructed, by John L. Borsch and Company, of Philadelphia, the apparatus here described. With various modifications I have used it daily for more than three years, and now present it in the hope that others may find it an additional aid in the daily routine of office work.

At the meeting of the American Ophthalmological Society, in July, 1889, I presented a convenient form of the Cretes rotary prism, a description of which will be found in the transactions for that year. The wood cut of this instrument is here reproduced, Fig. I.

The instrument now described is a fixed form of apparatus for the accurate use of the rotary prism and certain other accessories, *e. g.* the correcting-glasses for any existing defect of refraction, the stenoparic slit, the Maddox double prism and rod. The accompanying wood-cut, Fig. II, exhibits its details in a manner which will obviate any necessity for lengthy description. The essential part of the apparatus is the holder which can be mounted upon a stand designed to rest upon a table or desk—or as in the cut upon a floor-stand which is placed by the side of the chair occupied by the patient. At the top of this stand there

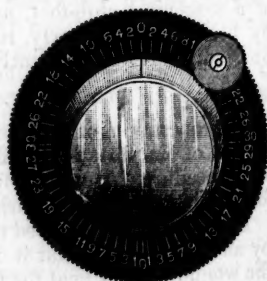


Fig. I.

* Read before the American Ophthalmological Society at Washington, D. C., September, 1891.

is placed a strong horizontal arm, which is carried to the front of the patient and supports a second upright shaft, which moves up and down freely but is fastened at any desired height by a binding screw. On this shaft is placed a chin rest, N. and at its top

of the way when not in use, but are readily turned upward into place when desired. A rotary prism should be placed on each side for rapid working, the zero mark at 180° on one side and at 90° on the other. On the posterior surface of the holders, K. is seen

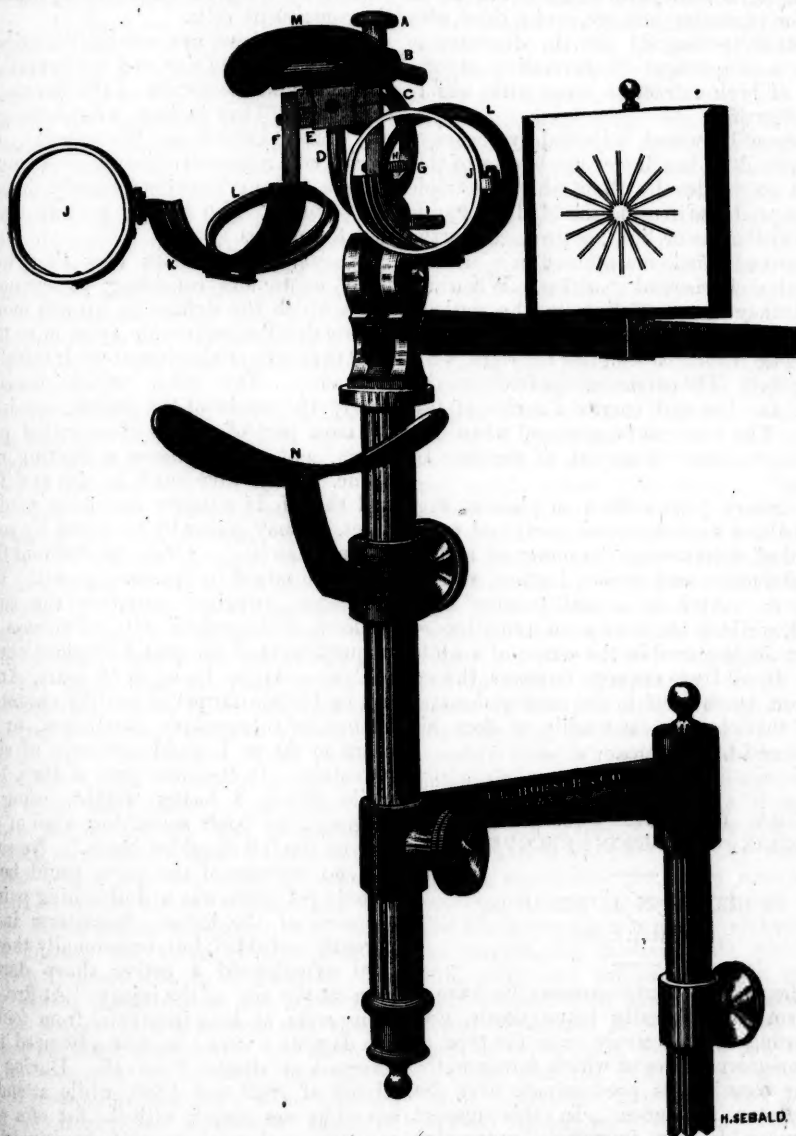


Fig. II.

the holders K. and accessories are supported. L. L. are a pair of rings or cells for the reception of the rotary prisms. These are hung on a spring hinge which permits them to be turned forward and downward below the line of vision, so that the prisms are out

the ring J. J. This is hung on a spring-hinge and on the left side is represented as turned outward, out of the line of vision, but *in situ* on the right side. These are designed for the reception of the Maddox double prism or red, each of which are

mounted in a cell which accurately fits these rings, and may be turned to any desired position, being checked at 90° and 180° by a stop-spring. These may be retained permanently in place, but are readily removed and replaced when desired, by other cells containing a stenoparic slit, a blank metal disk for excluding one eye, and a third with a central opening 2½ mm. in diameter to act as a diaphragm in correcting certain cases of high refractive error with widely dilated pupils.

M, is a brow-rest, adjusted by means of the screw A. Just below the border of this is seen a spirit level without which the triple images produced in using the Maddox double prism or the bar of light, as produced by the rod—are not easily maintained in a strictly vertical or horizontal position. When inclined they are confusing to the patient. The bar, with carrier on it containing the astigmatic chart is designed for work at a near point. The carrier moves freely to and fro on the bar and carries a series of test cards. The bar can be removed when not in use or turned down out of the line of vision.

The rotary prisms when in place as suggested above furnish a most ready and rapid method of determining the power of adduction, abduction and sursumduction at 6 m. or .50 m. At 6 m. a small point of light is used, while at the near point a small word of D = .50 is placed in the centre of a white card. In all these respects, however, the instrument lends itself to the preferred methods of the observer as readily as does his test set and trial frames.

SARCOMA OF THE DORSO-SCAPULAR REGION; OPERATION; RECOVERY.*

BY GEORGE N. LOWE, M. D.,

RANDALL, KANSAS.

In the formation of a sarcoma we have a neoplasm pathologically heteroplastic, predominating constructively over the type of the connective tissues in which, however, the cellular constituents predominate over the intercellular substance. In this respect they resemble the immature connective tissues; so that the comparison of sarcoma to embryonic formative tissue is perfectly apt.

*Read before the Mississippi Valley Medical Association, October 14, 1891, in St. Louis, Mo.

Sarcoma originates invariably in a structure belonging to the connective tissue group, *i. e.*, in formed or unformed fibrous tissue, in cartilaginous, bony, mucus, lymphoid, neuroglia, or adipose tissues. The transformation of these into tumor tissue is effected by the growth and multiplication of the constituent cells.

Of these there are several varieties, depending upon the size and configuration of the cells, and the nature of the intercellular substance. They include what have generally been known as fibro-plastic, fibro-nucleated, recurrent fibroid, and myeloid tumors. Many growths formerly described as "cancers" also belong to this class of new formations.

Structure.—Sarcomata may thus be defined as tumors consisting of connective tissue which throughout its growth more or less retains the embryonic type, in so far at least that cells predominate over intercellular substance. The cells, which constitute nearly the whole of the growth, consist for the most part of masses of nucleated protoplasm, and rarely possess a limiting membrane. They vary much in size and form, and though in a tumor one form predominates, all may generally be found by search (Cornil-Ranvier). Often the different forms are much mixed in the same growth. There are three principal varieties—the round, fusiform, and myeloid cells. The case now in question is of the round or giant variety.

CASE.—Angle E., aged 18 years, American by birth, a farmer of healthy parents, no history of tuberculosis, carcinoma, or sarcoma so far as I could ascertain of either parentage. In the latter part of May, 1889, while lifting a heavy weight, using his language, he "felt something kind of give way on the left shoulder blade." No swelling, no redness of the parts could be detected; yet there was a dull aching pain at the seat of the lesion. Sometimes it apparently subsided, but occasionally the patient experienced a rather sharp darting pain at the site of the injury. At first the pains were at long intervals, from four to five days or a week; as time advanced they returned at shorter intervals. During the winter of 1889 and 1890, while attending school he was struck with the fist of a comrade two or three times while boxing, in the same region of the first lesion. He also stated that later he was struck with a hard ball with great force at the same region. Those contusions increased the suffering of the patient; yet there was none of those

blows sufficiently severe to produce a discoloration or swelling.

About the middle of February, 1890, the obtuse pains were deep-seated and almost constant; the acute sharp pains recurring at shorter intervals. At this time his condition was such that he consulted a physician of ability. As there was no discoloration, heat, swelling, or marks of any lesion, although there was some tenderness (deep-seated) on pressure; as there was nothing visible, his physician, not suspecting anything serious or malignant, diagnosed rheumatism and prescribed accordingly without benefit. About the first of March, 1890, the young man discovered a slight enlargement, seemingly solid and deep-seated, on the scapula about two inches posterior to the scapular notch, on and above the spine of the scapula. This neoplasm assumed a slow but steady growth, which, on pressure, produced a deep, sickening pain. No heat or redness over the parts affected.

On the second day of April, 1890, the young man and his father came to my office in search of relief, and gave me the above history of the case.

On examination I found a solid growth, deep-seated on the dorsum of the left scapula, but was not attached to the periosteum, measuring two inches in diameter, producing a fainting, sickening pain on pressure. I diagnosed sarcoma, and stated the facts in the case to the father and son, and told them that the only means for relief and cure was an immediate operation, removing a sufficient amount of tissue beyond the cell proliferation. They persisted in not having an operation done at this early stage until other means failed, and begged me to use my best judgment in directing some other course of treatment. I applied iodine injected with glycerine of various strengths, without reaction, and with iodide of potassium internally, and would have injected the virus of erysipelas for reaction if I could have obtained it. The only benefit obtained from the injection of the tr. iodine with glycerine was that it seemed to retard the growth. As there was no improvement up to July, the patient passed from under my observation to a new field of treatment. I insisted upon an operation. I did not see the patient again until about the middle of February, 1891, at which time he returned with a double neoplasm about the size of an ordinary cricket-ball, which he stated had grown rapidly for the past two months. As before, I pressed the matter of operation, but he

refused. He begged for the iodine treatment again. I told him and his father that it was perfectly useless to waste time, as it would shortly terminate the boy's life. On the second day of April, 1891, the tumor measured $11\frac{1}{2}$ inches in length by $6\frac{1}{2}$ inches in width, perfectly adherent to the dorsum of the scapula, extending upward across the upper part of the dorsal and cervical vertebrae, and also extending downwards below the scapula, with an elevation above the surrounding surface about three inches. On the second day of April, I presented the young man to the members of the Republican Valley Medical Association in session at Concordia, Kansas, at that time. The majority of members present corroborated my diagnosis. The formidability of the growth now became a serious matter. About the 15th of April the young man and his parents consented to an operation, and I prepared the patient for it. On the 23d I operated, being assisted by Drs. B. T. Trublood, of Grand Island, Nebraska, and G. B. Morse, of Formosa, Kansas. At this time the growth measured 12 inches vertically and eight inches transversely. Palpation indicated a firmly adherent neoplasm. Fifteen minutes previous to the administration of the anæsthetic, I gave the patient gr. $\frac{1}{2}$ morphia sulph. hypodermatically; brandy $\frac{3}{4}$ ss. Dr. Morse administered the anæsthetic. Patient was ready for operation in fifteen minutes. Every antiseptic precaution was taken. I made the incision in the line of the vertex of the growth, commencing one inch from the summit over the cervical vertebrae down to one inch of the lower portion of the tumor. The growth was beneath the trapezius muscle. With a dissector I loosened the trapezius on each side of the tumor, and it was held back by retractors while I enucleated the entire mass, which was bound down by strong fibrous bands. The whole growth was deeply embedded on the scapula, the thoracic wall, the fourth, fifth, sixth and seventh cervical, and the first, second, third, fourth, fifth and sixth dorsal vertebrae. It was attached to the spine of the scapula, the sixth and seventh cervical, and the first, second and third dorsal vertebrae. The sixth and seventh cervical spines were removed with bone shears, the remainder of the spinous vertebrae being liberated with curved shears, also the spine of scapula. The wound was thoroughly irrigated with 1-5000 bichloride of mercury, then thoroughly dusted with iodoform, packed with $1\frac{1}{2}$ yards of borated gauze, a drainage tube inserted, wound

closed with deep and superficial sutures, dressed with borated cotton and gauze, all completed in one hour, this at noon. The patient rallied nicely with but slight shock. Six P. M., temperature 100°; pulse 72, strong and full; respiration normal; patient complained of some pain. I gave morphia sulph. gr. $\frac{1}{2}$, quinine sulph. gr. iij, brandy 3ss in a little syrup and water, which soon gave the patient rest until my next visit, April 24th, 8 A. M., when I found his condition good, with temperature 100 $\frac{1}{2}$ °; pulse 74; respiration 19. He had taken milk and soup in sufficient quantity and said he felt all right. I left morph. sulph. gr. $\frac{1}{2}$; quinine sulph. gr. iij; brandy to be administered *pro re nata*. At 10 A. M. the patient complained of pain, when the morphia, quinine and brandy were given as directed. He rested well the remainder of the day. I saw him at 7 P. M., when the temperature was 100.01°; pulse 72; respiration normal. He stated he was feeling quite comfortable. He had taken milk and soup in sufficient quantity. April 25th, 9 A. M., temperature 100°; pulse 70; respiration normal. Had rested quite well during my absence by taking morph. sulph., quinine sulph. and brandy at 2 P. M., April 26th. All conditions good. 6.30 P. M., condition the same as in the morning. April 27th, 10 A. M., temperature 100°; pulse 70; respiration normal. Had rested well during the previous night by taking quinine sulph., morphia sulph. and brandy at midnight. At 7 P. M. I found his condition unchanged.

April 28th, A. M., Dr. Morse present; temperature 99 $\frac{1}{2}$ °; pulse 70; respiration normal; had rested well the past night; condition good. As drainage had been profuse, I redressed the wound, first removing the gauze packing, then irrigating the wound thoroughly with carbolyzed water, reinserting $\frac{1}{2}$ yard borated gauze, and dressed the wound as before.

April 29th, 6 P. M., condition remaining good; temperature 99 $\frac{1}{2}$ °; pulse and respiration normal. April 30th, 10 A. M., temperature, pulse and respiration normal. Had rested well since my last visit; appetite increasing; asked for a more solid diet than milk and soup, which was granted. May 1st, temperature, pulse and respiration normal. I removed all packing and sutures, re-irrigated wound as before; external wound had healed by first intention, and things pointed to an early convalescence. I redressed the wound as before. From this time on the patient improved rapidly. On the 14th day (May 9th) after the operation,

he came a distance of 3 $\frac{1}{2}$ miles to my office for a redressing of his wound. At this dressing I found that the wound had completely healed internally as well as externally without any apparent disfiguration in the region operated upon. At this dressing I discharged the patient.

From this time on he gained strength rapidly, and was able to be in the fields ploughing corn in five weeks after the operation. From this on he enjoyed excellent health up until about the first of August, 1891. At about this time he noticed a small elevation or nodule on the left side of his neck, just posterior to the sterno-cleido-mastoideus muscle. Although I had made positive injunctions to the patient and his parents that if they discovered a return of the growth to report to me immediately, they failed to do so up to the last of August, when I found the growth about the size of an ordinary goose egg deeply embedded in the left side of the neck, beneath and posterior to the sterno-cleido-mastoideus muscle, with the indications of other regions being affected. The weather was extremely hot, and his general outlook was unfavorable. He had now consigned himself to a faith cure quack, whom he was persuaded to go and see, who induced him to believe without a doubt that she could cure him by words. His parents entertained the same belief, and they refused to have another operation done until the faith cure was exhausted, alleging that they could not pay for an operation every few months.

September 20th, the young man again came to my office, having now a growth on the left side of his neck, which measured 8 inches vertically and transversely, deeply embedded beneath the sterno-cleido-mastoideus muscle and clavicle—in fact, the entire field across his back was involved, heaving up *en masse* with the neoplasm; also two nodules on his breast. At this time they fully realized his sad condition, and wanted quieting powders so that he could rest. They also wanted me to intercede for him that he might go to some institution for treatment. I sent him to an institution at Topeka, Kansas, on the 20th of September, 1891. He is still there. As the prognosis is unfavorable, the surgeons in charge refused to operate, but they are resorting to injections into the tumor growth in the hope that they will break down the cell proliferations and thus prolong life.

My object in this paper is to show the necessity:

1. Of an early operation in all cases of

malignant growth.

2. That some species of sarcoma are more rapid and destructive in their course than carcinoma, especially the spindle and giant-celled variety.

3. The necessity of having a law to enforce patients so afflicted as soon as a correct diagnosis can be made, to an early operation, thereby preventing great suffering and prolonging life.

4. That in the case of a sarcoma which has grown to enormous extent, infiltrating the surrounding tissues to any considerable extent from the main growth with cell proliferation, an operation is almost useless as regards a permanent cure.

DIET AND THERAPY OF TYPHOID FEVER.*

BY CHARLES F. J. LEHLBACH, M. D.,

NEWARK, N. J.

It cannot be denied that, far from unanimity of professional opinion, regarding the dietary and therapeutic treatment of typhoid fever, there has rather been a tendency during the last ten or fifteen years to wider divergence in the choice of agents to meet supposed indications. The causes which have led to this unsettling of theory and practice are mainly due to: first, the close, and more systematic observation of the clinical history of the disease by means of exact thermometry; and, second, the discovery of its infectious germs, their origin, growth and relation to previously known pathological lesions and complications; third, to the advance of organic and synthetic chemistry, followed by many additions to the list of dietetic and remedial agents. With these new armaments, the thermometer, the microscope, the culture tube and the chemist's apparatus, the warfare against disease has entered into a new stage of experimentation. It is no reproach to physicians that in this almost wilderness of newly established facts, they should often strike out in seemingly opposite paths, apparently falling into contradictions and irreconcilable extremes. Sooner or later these seemingly opposite paths will meet, the apparent contradictions will be reconciled, the extremes will be welded together by the strong band of experimentally established truth.

It is not intended, were it possible, in this paper, to enter into a systematic criticism of

the various dietetic and therapeutic modes of treatment of typhoid fever, but to point out a few fundamental facts which should be borne in mind, else we go adrift without rudder or compass.

The first point to be emphasized is the fact that typhoid fever is a wasting disease, that from the first day of its incursion to the last day of pyrexia there is a loss of weight of the body. This waste occurs more or less in every case and probably under many different modes of treatment alike. The curve of weight-decrease during typhoid fever has been made the subject of careful examination in numerous cases by Prof. Ernst Kohlschütter (Volkmann's *Sammlung. Klin. Vortr.* No. 203—1887 Schmidt's *Jahrbücher*.) and it has been found that this curve takes an exactly uniform course. It sinks, at first rapidly, then, from week to week slower until complete freedom from fever. After complete apyrexia has occurred, it begins to rise. The fever alone therefore seems to be the cause of the decrease in weight, not as might be supposed, and has indeed been often assumed, the diminished supply of food. Probably all organs and tissues are equally involved according to Kohlschütter in the decrease of weight. Increase of weight, after apyrexia, follows more slowly, but also according to fixed rule.

Based upon some unique spectroscopic investigations, Henocque and G. Bandouin *Gaz. Hebdom.* 1888, 37, 38, 39), have attempted to prove that the activity of reduction of oxyhæmaglobin, *i. e.*, the energy of oxygen—waste in the tissues stand in opposite relation to the height of fever temperature. While it is certain that no particular dietetic or therapeutic method of treatment can prevent this waste entirely, it is only logical to conclude that this waste will be lessened in proportion to the reduction of the fever.

Undoubtedly basing himself upon the former consideration, we have been advised by Dr. R. F. Licorish (*Medical Record*, March 8th, 1890) to subject the patients in the first stage of typhoid fever to absolute starvation. He recommends to withhold all nourishment until the patient calls for it, but to give water whenever required. At the same time absolute rest in the recumbent position is insisted upon, in order to reduce the waste of the heart's strength to a minimum. These are the conclusions which Dr. Licorish deduces from his statements:

1. That typhoid fever may be aborted.
2. That to be so aborted the patient must be

*Read before the Practitioner's Club, Newark, New Jersey.

seen and treatment begun within the first few days of its onset—initial chill. 3. That our chief aim should be to restore the appetite, so that the patient may be nourished and rendered able to throw off the disease. 4. That to create an appetite the patient should be deprived of food until nature demands it, or if any be given only in very small quantities at a time. 5. That the maintenance of the horizontal position, so retards or prevents heart weakness as to enable us to starve the patient without any risk. 6. That great care should be taken in feeding the patient after he has regained his appetite, for should it be again lost, the temperature rises and a relapse occurs."

The chief difficulty that presents itself to the adoption of Dr. Licorish's starvation method, is the fact that, as we generally meet typhoid fever, in this part of the country, it is no longer in the incipient stage to which alone it is claimed to be admissible. The cases which we are called upon to treat both in private and hospital practice are generally from one to two weeks under way, and beyond any possibility of abortive treatment.

Again, may, we not justly suspect that numbers of these so-called aborted cases, in which the starvation method was apparently successful were not real cases of typhoid infection, but simply forms of malarial or ephemeral fever?

Another view which is taken by some, tending to a similar nihilism in practice, is that typhoid fever, being a self limited disease, the less interference with its natural course the better; that the typhoid bacillus during its growth and development evolves certain ptomaines or chemical putrefactive poisons which at last prove self destructive to the microbe. As an example the yeast cell is pointed to, which during saccharine fermentation, keeps on developing and multiplying until sufficient alcohol is produced to kill its own vitality, after which not even the addition of new yeast cells or sugar will be capable of revitalizing the fermentative process.

But it does not appear in accordance with the principles of truly conservative medicine to rely entirely upon the self limitation of morbid processes and to limit ourselves to the role of passive clinical observers. The eventual ptomainic self-destruction of the microbe is not the important element in its pathogenic history. The structural changes in the various organs, which accompany the invasion and the development of the bacilli

and their interference with the normal performance of the physiological functions of the organs invaded are the main concern of the practitioner. What becomes of the bacillus, whether he is finally starved to death, or dies in his own venom, is of far less importance to us than the question of how to counteract the destructive processes in the localities of invasion, in the tissues and in the blood.

If by the supply of a proper amount of food, the tissue-waste can be rendered less, or compensated for, or if the same end can be accomplished by the reduction of excessive pyrexia, we certainly leave the patient at the end of the fever in a better condition for more rapid convalescence and repair, and, by having kept his standard of vitality at a higher level, less liable to yield or succumb to the complications and after effects, which so often follow the disease.

That there is a possibility by proper alimentation to compensate to a certain extent the waste effects of the fever, is conceded, I think, by all modern clinical writers. The question: what is the proper alimentation in typhoid fever? is one not so easily answered.

Let us take the natural division of foods and examine into their adaptability to the demands of nutrition under the conditions of fever, according to physiological laws. First, the nitrogenized or albumenous foods, the proteids, including milk, eggs, jellies, strong meat-broths, etc., while easily digested by the stomach and made ready for absorption and assimilation during a state of health, are far from undergoing the digestive changes with facility, in typhoid fever, and for very good reasons. The secretion of the digestive juices throughout the alimentary tract depends largely, if not entirely upon the rapid and normal growth, casting off, and renewal of the epithelial cells. Epithelial cell-life lies at the bottom of digestive energy and of digestion and assimilation, from insalivation down to gastric and pancreatic digestion and lacteal absorption.

It needs neither much clinical study nor investigation in the autopsy room to teach us that in cases of typhoid fever the mucous membranes of the alimentary tracts, from the mouth down to the rectum are in a condition of very sluggish epithelial cell-growth and renewal, and as a result unfit to furnish the digestive juices needed for proper nutrition. Hence, in whatever form albumenous food may be supplied to the fever patient and in whatever quantity, only a very small fraction thereof will meet the normal physio-

logical conditions, for digestion and assimilation, and thus help to repair the fever waste.

The introduction of peptonized meats and pancreatinized milk may, to a certain extent, assist and facilitate the process, but even here, in the mere process of absorption the epithelial and lymph cells also play a primary role. It is an entirely wrong view to look upon the absorbent surface of the alimentary canal as simply a filter, and to consider absorption as a quasi mechanical process of osmosis or dialysis, and to suppose that by putting in a quantity of artificially digested and dissolved albuminous food it will filter right through the absorbents into the blood. The action of live epithelial cells is needed here as well as in normal digestion, and where this epithelial cell activity is deficient, as it is unquestionably in typhoid fever, even peptonized proteids cannot be claimed to compensate for more than a part of the activity of the secretory epithelial cells, and they furnish no more of supply to cover the waste than the crippled epithelial cell-life of the absorbent machinery can accomplish. This, to some, who may be over-enthusiastic in regard to the immense value which is claimed for artificially digested foods, particularly by their manufacturers and venders, may sound like medical heresy, but let me call attention to a simple fact. No less an authority than the eminent Berlin clinician, Prof. Ewald, has published his observation on the value of the use of peptonized eggs administered by the rectum. (*Zeitschr. für Klin. Med.* Bd. XII. 5 and 6 p. 407), and he found that these peptones as far as resorption by the rectal mucous membrane is concerned are entirely irrelevant. Enemata of non-peptonized eggs were as readily absorbed and as efficient.

There is no particular form of diet which has found more advocates and is more commonly relied upon in typhoid fever than the milk diet. In Germany its use is almost exclusive, being supplemented only by gruels and thin soups. At one time in England and in the United States, the homes of the two principal beef-eating nations, the beef-tea, and beef-juice fever held the same relative importance as the milk diet in Germany.

The abundance of meat supply in the former countries and its restriction in the latter undoubtedly explains the difference in popular opinion as to the relative values of milk and of meat juices for fever foods; for I venture to say that in the modes of cutting, of cooking and utilizing meat food in the United States, as much is thrown away as waste, as is used

for the population of the whole of Germany. Of course it is not intended to compare milk as a physiological nutriment to beef-tea, or beef-juice, but to me it is doubtful whether the casein and albumen, representing the nitrogenous parts in the milk, perform even a fractional part of expected alimentation in the peculiar pathological state of typhoid fever. I have seen typhoid fever stools of patients under milk diet, largely consist of curd in various states, in flakes and grumous masses, and in a recent autopsy the stomach was found to contain a large quantity of a sticky, pasty, pulpy mass of curd. It is not the amount of nutritive material which any particular article of diet contains, physiologically considered, which is at question in this discussion, but how much of the amount can be rendered contributory to waste supply, under the peculiar pathological conditions of the digestive tract—how much can be digested. It is the writer's conviction that very little of the casein of the milk given in typhoid fever is really digested and that its other constituents, the milk serum with its salts, and its sugar and its cream form the essential elements of nutritive value in these conditions.

There is one reason why, in the alimentation of fever patients, less stress need be laid upon the introduction of proteid food, namely, the fact that whatever tissue waste there is in consequence of the normal elevation of temperature, it is the conversion into heat of the food introduced, that is of primary importance. We must reduce as far as possible the general tissue waste, or prevent it. Can we expect tissue repair, particularly of muscle, tendon and the fibrous structures as long as the combusive process exceeds the normal? The conversion of albuminous food into caloric is a much more complicated chemico-vital process than the conversion of the simple hydro-carbons or carbo-hydrates into the same. It gives rise to the formation of a larger amount of side products to clog up the channels of excretion. Does it not seem reasonable then that we should attempt to regulate the food supply in fever so as to restrict it to the simplest kind of food which can, without complicated processes of vital chemistry, be converted into heat and thus save to the extent to which they may be utilized the combustion of the living tissues.

This brings us to the use of the hydro-carbons and the carbo-hydrates in fever—fat, sugar and starch. The same cause which has been mentioned as interfering with the digesting of proteid,—low activity

of epithelial cell life—also comes into play here. The cream of the milk which the patient drinks, is, in ordinary physiological digestion, readily fitted for absorption through the emulsifying action of the pancreatic juice. But in typhoid fever this gland partakes of the same general sluggishness of its epithelial cell-life as do the other secretory glands. As far as the lacteals are concerned we must not forget that they are not merely filtering apparatuses. It had been supposed that the leucocytes, the wandering lymph cells as the Germans call them, were the active elements in the fat absorbent processes of the intestines. According to Zawarykin they were presumed to wander between the epithelial cells to load themselves with the fine fat granules of the intestinal contents and then, penetrating the deeper layers of the mucous membranes, to return to the lymphatic vessels. But investigations made by A. Grünhagen, (*Arch. f. mikrosk. Anat.* XXIX 1 p. 139, 1889, *Schm. Jahrb.*) seem to have conclusively shown that the lymph cells are not at all concerned in the absorption of fat, but that this process is connected with the cells of the cylinder epithelium. These are found to be permeated by little clusters of fat, imbedded in various shapes, globular or radiating, in the cell protoplasm, whence they reach the lymph vessels of the mesentery. Bearing in mind that the glands particularly involved in typhoid fever, the solitary and agminated glands, are absorbent glands, we can readily understand, how fat absorption and consequently nutrition must be interfered with when large surfaces of these glands are deprived of their epithelium. Fortunately, however, this class of food can be introduced directly into the system by inunction through the skin. To the extent that this may be done we have a means of supplying a certain amount of caloric-yielding fuel, which may save a certain amount of the living tissue from combustion and waste. It must not be expected that we can thus compensate for all the waste, but whatever waste of tissue may thus be saved, be it ever so little, is so much gain. As a matter of clinical experience I may say that I have resorted to this feeding through the skin in a number of cases of wasting disease with good results. There is one fat, particularly well adapted on account of its easier absorbability to this purpose—the sheep wool fat, or lanoline.

I am aware that the absorbability of lanoline and of other fats through the skin has been denied or questioned, except in cases where the skin is broken; yet as far as my

experience, clinically, justifies me to form an opinion decidedly in the affirmative. In a very severe case of neurasthenia with hysteria and extreme leucocythemia in a girl fifteen years of age, who had almost absolutely refused food until her weight had gone down from over 125 pounds to below 100 pounds, lanoline inunction-massage was systematically resorted to. On two occasions, when the blood was submitted to microscopical examination to determine the relative number of white and red corpuscles, the former being found in abnormal ratio, incidentally the blood was found to contain large numbers of very minute fat granules, and as the blood had been taken from a part of the body not subjected to the inunction-massage, there can be little doubt that these fat granules had entered the current of blood through the skin.

Of all the foods the easiest of digestion, as far as simplicity of conversion into heat is concerned, of course starch and sugar stand first. The carbo-hydrates, starch and sugar, are more digestible than the hydro-carbons or fats. If then, we are able to introduce this class of foods in a state that they can be readily digested without giving rise to much detritus and without provoking mechanical irritation along the intestinal tract, we have a ready means to counterbalance to a certain extent the loss caused by the fever temperature. The food thus converted into caloric saves so much of the living tissue from being burned up. It is not necessary to dwell upon the processes of the conversion of starch into glucose or maltose, or of cane sugar into glucose, in order to render them fit for assimilation, nor need we go into a lengthy discussion as to the production of glycogen, the product of the carbo-hydrates in the liver. Suffice it to say that we possess at present, various preparations in the form of malt extracts which speedily, when mixed with the food, or given immediately afterward, cause conversion of starch and sugar into glucose and maltose.

One of the most distressing conditions in typhoid fever is the dryness of the buccal cavity. This is only increased by an exclusive milk diet. Starchy food, like boiled rice, either with milk or without it, is very grateful to the patients, as they are able in a moderate degree to exercise the pleasurable function of mastication. During my January service in the German Hospital about a dozen cases of typhoid fever were put upon partial rice diet, the rice being given with a proper amount of one of the malt extracts, and I must say that the result was gratify-

ing to me and the patients themselves. During the February service the same plan was followed with equally satisfactory results.

Hence, I do not hesitate to call your attention to the propriety of enlarging our fever dietary by the more liberal use of starchy food, and of curtailing the excessive, if not exclusive use of the milk diet, which contains too large an amount of undigestible and unassimilable proteids under the conditions of typhoid fever.

In regard to the therapeutic treatment of typhoid fever, I must limit myself to only a few general points. I am no believer in any routine treatment, and a firm advocate of individualism in disease. The lowering of excessive temperature so as to reduce the bodily waste to the minimum point attainable, is certainly one of our chief indications. Whether in one case it is accomplished by the cold bath, in another by ablutions or the sponge bath, or in other cases by any of the various antipyretics, are questions to be decided by the physician, after due consideration of the surroundings and of the individual history of each case. As a rule I think we should not allow the temperature of our patients to rise much above 103° F. nor should we interfere when it is at 102° F. or less. Of the intestinal antiseptics we have our choice in naphthalin, salol, bismuth and others; with some, however, i. e. carbolic acid, much caution should be used on account of the risk of inducing nephritic complications. When there is excessive peristalsis and the heart becomes weakened after the second week small stimulating doses of opium, say 3 grains of Dover's powder, are useful as far as my experience goes. I have been in the habit of resorting to the acid treatment in most of my cases, from the beginning to the end of the disease. The sulphuric acid is preferred by me for various reasons. In the first place, properly diluted with water and sweetened, it is more palatable than nitromuriatic, or simple hydrochloric, or phosphoric acid, which latter is mostly used by the Germans. Secondly, laboratory investigations as to the action of the acid as a germicide place it at the head of the list of acids as shown in a table in Kitasato's paper of results obtained in experiments in the Hygienic Institute, at Berlin, (*Schmidt's Jahrb.* 1888, No. 1, p. 8). In addition, as we all know, sulphuric acid added to a solution of cane sugar assists in converting it into grape sugar or glucose thus aiding digestion of the carbo-hydrates.

Finally, attention must be called to a prac-

tice which has recently come in vogue and with good results, namely, the washing out of the lower bowel with warm water once a day, irrespective of the presence or absence of diarrhoea. The object accomplished thereby is the more speedy removal of infectious material from the intestinal tract.

I will conclude with the good old maxim, nearly two thousand years old: "Prove all things; hold fast that which is good."

PATENT NOSTRUMS.*

BY L. W. FLANDERS, M. D.,
BURLINGTON, VT.

I have ventured to bring this subject before you because I have never heard it discussed at a medical meeting, and, it seems to me, that it is an evil too apparent and wide-spread to be passed over without comment. So far as I know, there has never been any decided movement made on the part of the profession towards exposing the patent medicine frauds with which the country is filled. There have been one or two journals started with this object in view, but they have failed for lack of support on the part of the public, and the violent opposition of the manufacturers of these secret preparations.

We all know how much faith the general public has in patent nostrums. As practitioners we find them every day, not only in the hands of the ignorant, but, also, among those whose educational advantages have been of the highest order. I well remember my surprise upon seeing a gentleman of my acquaintance, a man of more than ordinary ability in business matters, bring forth a bottle of Warner's Safe Cure and take a huge potion before breakfast. I asked him if he had any "kidney difficulty" and he replied, "No, but there is a great deal of Bright's disease going about and I don't propose to have it creep on to me if I can help it." This would lead one to think that he was an enthusiast in prophylactic medicine, but he was not; for, he had a cesspool within ten feet of his well, and no amount of patient argument would convince him that they were dangerous neighbors.

The people from whom patent medicine men reap their richest harvests are those who are suffering with chronic and long-

*Read before the Vermont State Medical Society Oct. 15-16, 1891.

continued diseases. Wearied with continual suffering and disappointed in the efforts of their physicians they grasp eagerly at anything that affords a prospect of relief, and the knowledge of these "Cure-alls" comes in spite of the most strenuous efforts on the part of the doctor. Our mails are loaded with circulars from the so-called "Dispensaries" carrying masses of corruption, lies, and impurity into the very hearts of our families. Our daily papers are full of advertisements designed to frighten the weak and timid into trying some celebrated nostrum. A large head line, "*Mother's don't let your child die!*" is followed by a description of the case of some little one who heard the "Death Angel," in large capitals, fluttering over his head and was saved by a timely dose of Somebody's Sarsaparilla. Then follows a list of trivial symptoms common to every growing child, declared to be the forerunner of frightful disease, which a dose of the aforesaid Sarsaparilla will surely prevent. The mode of approaching chronic invalids is crafty but not flattering to the profession. "You have suffered years; you have tried various physicians who have given you nauseous drugs and subjected you to needless operations," then in large black type, "What benefit have you received at the hands of your physicians? None!" (I quote literally.)

So much for advertising. Now let us see if these men give an equivalent for the money paid and if their printed labels are true or false.

A fashionable journal which comes to my notice frequently, has a column devoted to correspondence with ladies. Every week comes an inquiry for something to improve the complexion. The answer is invariably, "Recamier Preparations, which are harmless and endorsed by the leading ladies of the country." Recamier Balm when analyzed contains, according to good authority, corrosive sublimate and oxide of zinc. It costs, at the highest estimate, ten cents; it is sold for one dollar and a half a bottle.

Dr. Herrick gives a description of his famous plaster; tells us that it has been the labor of years to bring it to perfection; and calmly informs us that the holes had to be cut in it to allow the deleterious matter drawn from the body by the plaster to escape.

Some time ago I had a case of neurasthenia in which the patient had contracted the morphine habit in trying to get relief from insomnia. This I was endeavoring to break him of, and, upon the occasion of one

of my visits, he placed in my hands a bottle of Scotch Oats Essence; warranted to cure all nervous disorders and to be a specific for the opium habit. This he was anxious to try and was very indignant because I would not consent to it. The composition contained as I have since learned one eighth of a grain of morphine in every teaspoonful.

Again, I had a case of heart disease in a lady seventy-two years old. There was marked cardiac dilatation, a weak impulse, and, of course, the general oedema was very great. The patient received from a friend a package of "Dropsy Balls" with many recommendations as to their efficacy. They were fully three-quarters of an inch in diameter, a dark, pasty mass, looking like tar and molasses. The directions were to take one at night, and in the morning to follow with a teaspoonful of Epsom Salts every hour, until there had been fifteen or twenty movements of the bowels. The fee to begin with was fifteen dollars, and if a cure was effected, fifty dollars. It is needless to remark that the "Balls" were a blind and the patient paid fifteen dollars for the advice and a pound of Epsom Salts.

The latest monstrosity I have met with is "Wm. Radam's Microbe Killer." The trade-mark consists of a picture of William armed with a metaphorical microbat club, if you will allow me to coin a word, endeavoring to knock the skull from the gentleman upon the "Pale Horse." This delightful medicine comes not in bottles, but in gallon jugs; two gallons in a case. Of course, it cures everything; but phthisis is the specialty. The patient is to drink it, bathe in it, inject it into his rectum and in short fairly luxuriate in an atmosphere of this wonderful compound. According to the Druggists' Circular this remedy appears to be composed of oil of vitriol, four drachms; muriatic acid, one drachm; red wine, one ounce; spring water, one gallon. The manufacturers print scores of testimonials of the wonderful cures effected by its use, setting forth how this one was nearly dead with phthisis and that one crippled with chronic rheumatism, but after taking a few gallons of Microbe Killer were permanently cured. Think of it gentlemen! medicine taken by the gallon, and yet there are those who claim that the Homoeopathic school with its minute dosage is increasing in popularity.

What are such testimonials worth?

Some physician has claimed that he could get testimonials of cure as the result of a medicine composed of pounded brick, and

I have
have
bread
ance
of pu
"You
cover
ally t
bound
return
to exp
a rem

WH
unreli
The
are p
Some
soothe
I, hav
of col
ously
lic ac
poison
gorge
paten

WH
this g

As
matte
sional
efforts
paid t
propr
is not
again
secret
cases
the pa
his ph
does n
all, en
and a
with
say, "
Safe C
you d
the be
show
cents
ful ar
most
have
which
is of
tions;
prepa
brated
physi
ular v

I have no doubt but that he could. We have all performed miracles with brown bread pills. A gentleman of my acquaintance consulted a doctor as to the advisability of putting a patent plaster upon his back. "You might just as well bind on a book-cover!" was the reply. Taking this literally the sufferer went home and actually bound on the cover of an octavo volume and returned in a few days to report a cure and to express his surprise that so common-place a remedy should be so efficacious.

Who can estimate the harm done by these unreliable preparations?

The most powerful and dangerous drugs are placed in the hands of the ignorant. Some of us have seen dead infants who were soothed into their last sleep by Mrs. Winslow. I, have seen an old lady upon the verge of collapse from using Athlophoros too zealously; presenting the toxic effects of salicylic acid and colchicum. If the red label for poisons was faithfully carried out what a gorgeous array we should have upon the patent medicine shelf!

What can we do as physicians to remedy this great evil?

As a rule we are too luke-warm in the matter. We utter a feeble remonstrance occasionally but that is about the extent of our efforts. In many instances postmasters are paid to send lists of chronic invalids to the proprietors of "Dispensaries." See that it is not done in your town. Enforce the law against traveling quacks and venders of secret nostrums. Attend to our chronic cases more faithfully. In many instances the patient resorts to quack remedies because his physician takes no interest in his case and does not visit him unless sent for. Above all, encourage analyses of these preparations and acquaint ourselves as far as possible with their constituents. The patient may say, "How do you know whether Warner's Safe Cure is good for my disease or not? you don't know what is in it," and he has the best of the argument. But if you can show him that he is paying a dollar for ten cents worth of salt-petre, you have a powerful argument on your side; you appeal to a most tender spot—his pocket. Most of us have access to the Druggists' Circular, in which is published from time to time analyses of the more important patent preparations; so that with a little care we may be prepared to show our patient that his celebrated remedy has been used for years by physicians, and can be purchased in the regular way at half the price he paid for it.

SPECIAL CORRESPONDENCE.

THE TENTH INTERNATIONAL MEDICAL CONGRESS, AT BERLIN, AS I SAW IT.

BY GEORGE DOUGLAS, M. D.,
OXFORD, NEW YORK.

DELEGATE FROM THE AMERICAN MEDICAL ASSOCIATION TO THE WORLD'S MEDICAL CONGRESS AT BERLIN, GERMANY, 1890.

(RESUME.)

Place of meeting.—Officers.—Some of the distinguished delegates of the Sections.—Some of the papers read.—Social festivities.—Koch; biographical sketch; his researches, aims and efforts.—Great desirability of a remedy for tuberculosis.

One of the events which crowned the centennial year of 1890, and made it memorable, was the International Medical Congress which convened in Berlin, Germany, August 4th. The largest gathering of representatives of the medical profession the world has yet seen, and probably the largest the present generation will ever see.

The first gathering of the Congress on Monday morning, 11 A. M. was in a grand amphitheatre, called the Circus Renz, resembling in shape the Coliseum at Rome, seating upwards of eight thousand persons, but on that occasion every inch of standing room was occupied and filled and crowded by at least ten thousand persons, among them army officials and representatives of Government in conspicuous dress with imperial decorations and honorary badges of many beautiful and striking designs; and delegates not only from every country of Europe and from America, but from Asia, from Africa, and from South America, from Australia, and from the islands of the sea,—scientists and scholars from every portion of the globe, who had come there to submit to the world's tribunal, the results of their truest thoughts and most patient labors.

The beautiful amphitheatre was draped with the flags of all nations, festooned with flowers, and made brilliant with flashing lights and amplitude of colors.

After the organization of the Congress, there was first the address of welcome and the reply; when came the able, and most fit

and timely address of the President, the distinguished Virchow, the great teacher of cellular pathology, who, crowned with the knowledge of three-quarters of a century of research, honored and almost idolized by his own countrymen, still survives in a most remarkable grandeur of physical manhood. After the address there was presented before the large audience, from each of the principal nations represented by delegates, one, as the medical representative of such country,—Sir James Paget, of London, the representative of England, and Surgeon-General John B. Hamilton, of our country, but to Sir Edward Lister, of England, was recorded the most enthusiastic reception of them all, evidently indicating the unanimity of the profession in according to him very high and universal honor for his introduction of the antiseptic treatment in surgery, which has given to that branch of our profession such an increased percentage of success, and with it so much greater confidence and respect with mankind at large.

There were but three general sessions of the Congress in this amphitheatre, most of the time being devoted to the reading of papers and to discussions in the sections of the Congress, their place of meeting, a very large and commodious building in the Austellungs Park, a famous place of resort with the pleasure-seeking Germans, with halls of entertainment, musical and theatrical, picture galleries and beer gardens, and the surrounding buildings were utilized as places for the extensive exhibits of everything pertaining directly and indirectly to the profession,—not only instruments and appliances of every kind known to surgery,—medicines and chemicals from the largest firms of almost every city in Europe, with some from our own country, but systems of gymnastics, health-lifts, hygienic baths and hygienic beds, improved modes of ventilation, hygienic foods and drinks, seemingly all in all an immense world-wide collection.

This beautiful park was made approachable from almost every portion of the city by public tramways, and from the central part of the city by an elevated railroad, far more commodious, substantial and magnificent in its structure than anything we can boast of in this country.

It was in these eighteen sections of the Congress, embracing all the different departments of medicine and surgery, that the greatest interest was centered. The official languages used at all meetings were German, English and French, but in discussions other languages were permitted, but reported by

some one of the secretaries in one of the three official languages, and in this manner ten tongues and twice as many dialects were spoken in the course of the numerous discussions.

Each of these sections were presided over by a President, also a Vice-President, and usually not less than three Secretaries reported papers and discussions.

In the section of surgery in which I registered myself, there were upwards of 1200, and 15 sessions were held in the six days' time of the Congress, which, with the social events of the occasion, filled up almost every moment of time during the eventful week.

I did not, however, strictly confine myself to this section, but went about at will to other sections and especially where and when a paper was to be read by any one of the distinguished members, or celebrities that I felt a special desire to see and hear; and it was to me the fulfillment of a much desired opportunity and a life-time event to look upon such faces as Virchow and Koch and Pasteur and Lister and Esmarch and Tait and Billroth and Oppenheim, Sir Spencer Wells, Sir James Paget, Apostoli of Italy, Barbour of Edinburg and a host of others,—where Canada and the United States met Brazil and the States of South America; where Mexico met Russia; Great Britain met Italy; Spain met Japan; and Belgium and Holland and Sweden met Asia and the islands of the sea; where France only partially represented, but by the noblest and most large-hearted of her sons, was most cordially greeted by Germany, and grew cheerful and fraternal; and America with her 157 delegates, was cordially met and greeted by all, and when the number was given at the first gathering in the Circus Renz, the announcement was greeted with cheers long and loud.

In some of these sections, complaint was made by certain delegates from our own country, England and other representatives, not German, of a lack of courtesy and of proper recognition, and perhaps with reason, for there was somewhat evident the same "animus" as possessed the little lad, who said to his sympathizing playmate, "You have no right to cry, for it is my grandma's funeral," and the Germans appeared to some extent to consider it their Congress, appropriate the front seats, and monopolize the time.

The Germans as a nation are fond of social festivities, and there was not any lack of arrangements in this direction, although,

differing in some respects from the usual American style, with invited guests. I was asked on my return if I did not find the Germans a very hospitable people. My answer was—"That depends much upon your definition of hospitality!! If you call it hospitality for a friend to invite you to dine with him, and then he requires you to pay an equal share for the viands, and the wines, then they are truly hospitable." The only free entertainment given was the first, on Monday evening, by the Burgo-master, or Mayor of the city, at the Rathaus or Town Hall, with no ladies present, the expenses of which were paid by a Government appropriation by the Reichstag or Parliament at the recommendation of the German Emperor, who also gave a court reception at his palace in Potsdam, just before the close of the Congress. At this reception the invitations were limited to four hundred—Germans mostly excluded, and the American delegates remembered at least a *pro rata* share.

Each section had their respective banquets, with speeches, toasts, etc. In the surgical section only 700 of the 1200 registered purchased tickets to the banquet held in a large and beautiful hall of the Hotel Central, perhaps the most magnificent hotel in Berlin, and was presided over by the Royal Court Surgeon, Von Bergmann, with Prince Carl Ludwig present, and at the tables, Sir James Paget, Sir Joseph Lister, Von Esmarch, Billroth, Oppenheim, and on the right of the President, in place of honor, our representative Dr. Billings, of Washington. On the next evening several large balls were given in different parts of the city. I attended the one given in the beautiful winter garden of this same hotel, at which was present the Princess of Germany, eldest sister of the present Emperor, and led with a prominent German official, the first dance of the evening, which was much after the order of the stately minuet of the olden time. After the dance, I had the opportunity of meeting her, and was most favorably impressed with her kindly as well as courtly air, her appearance of good sense, and truly lady-like and considerate manners—a model and a pattern for many of the simpering, vain snobs in our own country, who can boast much more of money than of brains, or intelligence. The Emperor did not return as was expected in time to be present at the Court reception at Potsdam, and without his presence it lacked point and interest, and the palace itself is

one of the least imposing of any of the royal palaces of Germany.

The "Farewell Banquet" and reception was given at Kroll's Garden in the Royal Platz, when upwards of ten thousand were fed and wine and supplied "*ad libitum*," with lager beer, in a way that was highly German, and quite incomprehensible to an American. The eighteen special sections of the Congress were each made centres of special interest by the scientific papers read, containing the latest researches and investigation in these respective departments of medical science.

In the section of Surgery, a very able paper was read by the distinguished surgeon, Oppenheim, on the subject of brain surgery, describing the successful removal of a sarcomatous tumor from the brain, and Professor Gluck, with one of his patients, demonstrated the use of the articulated ivory pegs, in a case of excision of the knee-joint, introduced into the medulla of both bones so as to give support and motion to the joint.

In the section of neurology, the subject of brain surgery at the present time attracting so great attention in the profession, was extensively discussed, with a citation of many unusual cases. Victor Horsely, of London, led in the discussion upon cerebral hemorrhage, and contrary to my preconceived ideas, it was decided that the ligature of the carotids was of no service in this class of cases.

In the section of obstetrics and gynecology, Professor Barbour of Edinburgh, read a very comprehensive and exhaustive paper on the stages of labor with consideration of the after conditions and complications which most frequently attend this class of cases.

In this section Dr. Parvin, Professor in Jefferson Medical College, Philadelphia, also read a masterly paper, listened to with much attention, on artificial premature labor, its indications and methods. A long discussion followed, in which many took part, and in particular the question canvassed as to which procedure was the most advisable in deformity of the pelvis, where premature delivery is demanded, whether by the Cæsarean section at or before the full time (which had many advocates) or by enforced labor at the seventh month. The majority of opinions was, however, that the Cæsarean mode was the most hazardous both to mother and child.

On the topic of uterine fibroids, or myomata, Dr. Apostoli, of Italy, distinguished

in galvanic treatment of diseases, read an able paper advocating electrolysis instead of the curette and other surgical measures, and, when advocating his most advanced and radical ideas, was a little hissed by the French, but applauded by all others. In the history of cases treated by electrolysis as given by himself and by others, there was certainly the most satisfactory results shown in this method of treatment.

Dr. Kaltenbach, of Halle, Germany, read a paper upon extirpation of the uterus, in which he cited 82 cases of total extirpation by himself, for cancer and other diseases of this organ, with the result of only two cases of death. After the reading of this paper there was a very interesting and animated discussion participated in by physicians from London, from Prague, by Pozzi of Paris, by Olshausen, by Landau, and by A. Martin of Berlin, the first distinguished operator of extirpation of the uterus, by Czerny, of Heidelberg, and by a gynecologist of national reputation with an unpronounceable name from Moscow in Russia.

In the section of state medicine and hygiene, Dr. J. Hutchinson, of London, gave a very able and thoroughly exhaustive lecture without notes on the non-contagiousness of leprosy, in which he took still more advanced and positive ideas than in his articles published in the early part of the year '89, in the *British Medical Journal*, that leprosy is absolutely not contagious, and that it is by a special kind of poison taken into the system in connection with food, that this loathsome disease is induced. A certain specific kind of "bacteria" has been found in the blood of lepers, and this is found only in a certain species of fish, and it is by the eating of this kind of fish that the once healthy individual or person becomes a leper. This species of fish is found to be common in leprosy districts, and as the varieties of leprosy are the same the world over, in hot and cold countries alike, this fact would indicate that the cause must always be the same. In Norway, India and the West Indies, nurses and surgeons do not fear to come in contact with lepers, so far as contagion is concerned. Hundreds of surgeons daily encounter the same risks that Father Damien, the Catholic Priest, did, but he exposed himself to other dangers as well, partaking bountifully of all kinds of fish and food in use in that country of lepers.

In England the most intimate possible contact with lepers has not been sufficient in itself to communicate the disease. A striking illustration and proof of this is the in-

stance of the colony of lepers from Norway that located in the northwestern portion of Minnesota, not one of the wives, or children being, or becoming lepers.

These advanced ideas by Dr. Hutchinson were given more especially in the interests of humanity, and to prove how needless the oppressive regulations in almost all countries, of making this unfortunate class outcasts, expelled from society and forbidden to mingle with the rest of mankind.

Dr. French, of Brooklyn, led with an able paper in his specialty—the throat, and Dr. Wood's address on anæsthetics was a state paper and was assigned a place of honor—that of the closing session.

I will not attempt to give you an idea of the subject matter of all the papers heard, for that would be impossible, but every delegate will remember so long as memory lasts, the scene when Koch stepped forward to read his "Researches"; the ovation which he received, most strongly disproving the old adage that "a prophet is without honor in his own country."

Those salvos of applause were received with no gratified look of vanity, though courteously acknowledged, it was with almost a perceptible manner of annoyance, and when the cheers had subsided and he commenced the reading of his paper, his gentle yet decided bearing, saying so plainly, that he was giving us the truth, as he had found it, his deep-set eyes, so true and steady, you could not but accept his deductions and conclusions without a question. Not being able to follow his paper, which was in German, I watched with feelings akin to awe, the lines and shadows on the faces of those listeners who, gathered there from the ends of civilization, hung upon his words with breathless interest.

I have many times seen men and large audiences profoundly moved by passionate orations and stirring appeals from forum and pulpit, but never have I seen an audience of intelligent, educated, cultivated men, listen with such intense interest as to this man, who stood there, striving to give to dying humanity a respite from a disease, which in all its varied, hydra-headed forms, has swept to an untimely grave far more than any other; I had almost said than all others.

In this Medical Congress, so largely represented from all civilized countries, while listening to the papers of these intellectual and professional giants, one could seem to divine that there was a pervading presentiment and belief that a great tidal wave in science was imminent, and that it centered

on the discoveries of Koch. His name was upon almost every lip, his researches the absorbing topic of the hour.

Bacteria was in the air, and in its many forms or names of bacilli, microbes, microcosma, was spoken of and speculated upon, as the cause of almost every disease that flesh is heir to. The prominence of this distinguished investigator and scientist will be my excuse for giving a brief history of the man, from such and various sources as I have been able to collect them.

Professor Robert Koch, as we are told, was the third of thirteen children, the first nine of whom were boys. He was noted as a studious lad, and early in life developed a fondness for the microscopical study of lichens and mosses, and when his mates and companions were out hunting and fishing, he was making such minute investigations at his favorite pastime. He completed his course in the High School at Clausthal, Hanover, at the age of seventeen, but was unable until he was eighteen to enter the University of Göttingen, where he finished his studies.

In his second year at this University he wrote a thesis which won the first University prize. We next hear of him as a physician at Wollstein, a Polish country town, in the district of Bomst in the Grand-Duchy of Posen, and while there received the government appointment of district physician of Bomst. It was at this time that he made his researches and investigations and performed his experiments relating to anthrax, and its characteristic bacilli, and in 1875 published his first work on anthrax, giving to the world the results of his discoveries, and the etiology of that destructive disease, and also published some treatises on wound infection.

In the summer of 1879 he was appointed to the position of medical expert in the law courts in connection with the University at Breslau, but this position was not satisfactory to him, neither scientifically nor pecuniarily and he returned after a few months to Wollstein, where his place as district physician had been kept open for him. He was, however, soon after, in 1880, called to the newly founded "Imperial Office of Health" in Berlin, where he has since been pursuing his wonderful researches on the tubercle and cholera bacilli, which we earnestly hope, believe and trust, will prove not only a great honor to the German Government, but of great advantage to science and to all mankind. The distinguished Professor Ferdinand Cohn, of Breslau University, the famous botanist and scientist says: "When

Koch came to my Institute on April 30th, 1875, I can truly boast that in the first hour of our intercourse, I recognized in him an unequalled master of scientific investigation. His method, his experiments, the classic clearness of his statements, were all as perfect in his first as in all his later researches." He further says: "All Koch's works have been so complete in form, and contents, that nothing remained for those that followed but to confirm them for it was not possible to add anything essential."

But in this medical Congress, notwithstanding that none doubted the sincerity of this new prophet, there were not wanting those possessed with a spirit of skepticism which inclined them to mock at the arguments of Koch. Against Koch was Virchow, unwilling to abandon his long cherished biographical doctrines, and Mr. Lawson Tait, the distinguished anatomist, surgeon and controversialist, always vivacious, and somewhat reckless in manner, facetiously, almost derisively said that, "if ever he got together enough bacteria to make a poultice, he would slap it on the next wound he had to dress."

There were others, who with greater candor and sincerity, willing to accept whatever might be truth, asked the question, "Have we yet struck the right trail?" and "Have we not been too much swayed by our hopes?" Time and still further investigations can alone answer these questions. This man is no charlatan, but an earnest seeker after truth. Look on his earnest face, his deep-set truthful eyes, and you will not doubt that.

By the ignorant and obtuse, he is not understood, and consequently misrepresented; by the envious maligned; by many of the conservative class, doubted; by the cynical class, sneered at; descried by the egotistical, who claim themselves the only fountains of knowledge; but to the earnest seekers after truth, who believe there are more things in heaven and earth than has yet been found in philosophy or science, he will be accorded at least respectful attention and a candid hearing. The superior effects of the treatment of many diseases by hypodermic injections are already very well known. As example, hemoptysis by injection of ergot; of syphilis by hypodermic injections of cyanide and bichloride of mercury, and chloride of gold and sodium; the prompt effect of Sammt's treatment of erysipelas by carbolic injection; strychnia and quinine in typhoid conditions. The experience of Tyndall, in New York, in the vaccination process, for the cure of tubercu-

losis, promises favorable results, and Dr. Landerer has obtained beneficial effects in phthisis from hypodermic injections of balsam of Peru, which he says goes at once to the diseased part, thus stimulating the animal fluids. That certain chemicals have a *selective* action on tissues cannot be doubted; as, for example, the hypodermic injection of cantharidin, resulting in the production of inflammation of the air passages; and, coline, a volatile liquid, alkaloid, from the areca nut, has a selective action on the heart, digitalis upon the cells and vascular system. This would seem to show that there must be a sort of antagonism or isomerism between animal and chemical and vegetable poisons; and why may not more universal application be made of this principle, with a view of obtaining more therapeutic agents and effects.

The great hopes and expectations formed at the first publication of the methods and discoveries of Dr. Koch, have resulted in decided disappointment, but the most recent statistics obtained by the German Government, from fifty-five hospitals would indicate that the reaction that has set in against his treatment, is beyond what facts would justify, considering the utter hopelessness of this class of diseases as treated by other and former methods, these statistics showing that while less than 13 per cent. of cases of internal tuberculosis, were cured, 30 per cent. were improved, leaving only a little less than 60 per cent. of unimproved and fatal cases.

Of cases of external tuberculosis about 15 per cent. were cured, upwards of 40 per cent. improved, leaving less than 50 per cent. of fatal and unimproved cases, in this, as it would seem, more curable form of tubercular diseases. Koch himself, while believing that his remedy "Tuberculin" is a cure for incipient tuberculosis of the lung, does not claim there is yet established the fact of its being a permanent cure, and fears that in advanced tuberculosis, its use will no more than prove beneficial. The first marked change by its use in tuberculated lung affection is that the expectoration becomes non-purulent, and this change greatly retards the rapid wasting of strength and vitality so marked in advanced tuberculosis of the lung.

Thus far the most striking and rapid cures have been effected by its use in lupus, where recovery has repeatedly followed a single injection. The investigations of Robert Koch have unquestionably opened up the way to discoveries into new and valuable ways of diagnosis and treatment of

diseases, where microbes play an important part in the inception and progress of disease, and out of it may finally come more certain and effective measures, prophylactic and curative. It was from Robert Koch that the illustrious Pasteur obtained his idea of his present treatment of hydrophobia, from a demonstration made by Koch in King's College, London, of his then new method of cultivating microbes, during the International Medical Congress in that city in 1881. It is in the same line of investigation, discovery and treatment, as that by which the immortal Jenner gave to the world the methods of restraining and preventing what was less than a century ago, one of the most dreaded and terrible of the diseases that scourged the human race, and gave to the physician that almost omnipotent power by which he can lay his hand on that loathsome disease (the small-pox) and say to it, "Thus far shalt thou go, and no farther, and here and now shall thy devastating progress be stayed."

If this can be done to tuberculosis, in all its manifold forms and complications, what a boon it will be to poor, suffering humanity, and how well worthy our greatest efforts, our most diligent and patient study and research. In my heart are no cynical sneers, no ridicule or contempt for Koch, or any other earnest worker in all and every rational method which may tend to mitigate and limit disease and suffering. Consumption, in its comprehensive signification, as generally used, classes among its victims more of those who are refined by nature, beautiful in person, intellectual, brilliant, and attractive in social life, than any other, perhaps all other diseases. How often do we see of the weaker sex (I mean physically, not mentally) those whose beauty and loveliness make even their very presence a benediction and a blessing, long before life has reached its meridian, fade away from family and friends, leaving hearts and homes sorrowing and desolate, some going in the morning of life, and seeming only like beautiful visions, sent for a little time to cheer and bless us, and then taken away.

How well do I remember one such, who, for five brief years was the light and joy of a happy home, filling its very walls with sunshine and music, but who, after only eight weeks of what is not inaptly termed in common parlance "galloping consumption" immediately following the birth of her first-born child, one morning in the early spring-time, just as the sun was breaking over the Eastern hills, folded the white hands across

the peaceful breast, which soon ceased its throbbings, bade me farewell and then the gentle, loving spirit went away.

The fragrant and beautiful rose that blooms under our window, or in our gardens, gladdening our senses with its sweet perfume, our eyes with its exquisitely blended colors, sometimes fades prematurely; some untimely blight causes its lovely petals to droop and fall, and our hearts sadden with disappointment at the sight of the destruction of what we had thought would cheer us for many a long summer's day, but we have consolation in the thought that at another spring-time it will bloom again. But when disease and death comes into our homes and takes from us the loved and cherished ones, we know that no coming spring-time will ever bring them back to us, we bury them out of our sight, and so much of the light and joy of our life has gone out forever.

God grant that the day may not be far distant when this class of diseases which have so long been the *onus probandi* of medicine, shall, by investigation and research be made as curable and controllable in the hands of our profession, as the once-dreaded small-pox, that marred and decimated the human race. And with this desire in my heart, this prayer on my lips, I bring to a close this poor attempt at portraying "as I saw it" the Tenth International Medical Congress at Berlin.

SELECTED FORMULÆ.

ECZEMA.

Hollopeter has used with great success the following:

R Ac. salicylic.....gr. xx.
Zinci. oleat.....3ij.
Cocaine.....gr. v.
Pulv. amyl, q. s.....3ij. M.
Sig. Use as powder, externally.

The salicylic acid prevents fermentative changes in the skin; oleate of zinc adheres very closely to the skin, and protects it; the cocaine may be put in or left out, conditionally as to whether there is pain or not.

If, on the second visit, there is little pain, and the scales are drying up, the cocaine may be discarded; later, the zinc may be left out, then the acid, so that finally only the starch is left. After this, alcohol may be used.—*Times and Reg.*

TREATMENT OF CROUP.

Dr. Betz (*Revista de los Hospitales*, No. 30, 1891), in a desperate case of croup, used inhalations of the following with success:

R Ether.....grammes iv.
Ether acetic....." ij.
Menthol.....gramme 0.6.
Inhale every fifteen to twenty minutes.

In one day the symptoms had disappeared. The child recovered.

Inhalations of ether diminish congestion, tumefaction and œdema of the laryngeal mucous membrane.

NEW MEDICATIONS AS HYPODERMICS.

Of late, advantage has been taken of the bland qualities of certain hydrocarbons,* as also of their solvent properties, to prepare a variety of hypodermic solutions. Several of these have received the names of their suggestors as Picot's, Pignol's, Morel-Lavallée's solution, and in answer to inquiries from some correspondents we give them below:

Picot's Solution.

Guaiacol.....5 grms. 75 grains.
Iodoform....." 15 grains.
Olive oil.....48 c.cm. 14 f3.
Liquid vaselin q. s.
to make.....100 c.cm. to make 3¼ f3.

Pignol's Solution.

Eucalyptol.....14 grms. 216 grains.
Guaiacol.....5 " 75 grains.
Iodoform.....1 " 15 grains.
Almond oil, to
make.....100 c.cm. 3¼ f3.

Morel-Lavallée's Solution.

Eucalyptol.....12 grms. 180 grains.
Guaiacol.....5 " 75 grains.
Iodoform.....4 " 60 grains.
Olive oil, to make.....100 c.cm. 3¼ f3.

Besides the above: Creosote, 1; almond oil, 15 c.cm.; eucalyptol, 4; almond oil, 10, are in use. The hypodermic dose is from 3-12 c.cm. (50-210 minims) in 24 hours.

In preparing these solutions the aid of the water bath is needed to effect the solution of the iodoform, after which the other materials are added. The bottles and materials should be sterilized in the usual method.—*Pharmaceutical Record.*

MISTURA ANTACIDA.

R Cretae præp.....3jss.
Sodii bicarb.....3j.
Tr. cinnamomi.....3jss.
Aqua.....3jss.
M. Sig. Teaspoonful every two hours.

R Liq. potas.....℥ xx.
Mist. cretae.....3j.
Tr. calumba.....3j.
M. fi. haustus, t. i. d.

—*The Prescription.*

THE MEDICAL AND SURGICAL REPORTER.

ISSUED EVERY SATURDAY.

THE BUTLER PUBLISHING CO., (Incorporated),
PROPRIETOR AND PUBLISHER.

EDWARD T. REICHERT, M. D., Editor,
(Professor of Physiology, University of Penna.,)
Office, E. W. Cor. 36th and WOODLAND AVE.,
Philadelphia, Pa.

CHAS. E. MOUNT, Advertising Manager.

DIRECT ALL COMMUNICATIONS TO
P. O. Box 843. Philadelphia, Pa.

TERMS: Five dollars a year, strictly in advance, unless otherwise specifically agreed upon. Sent 3 months on trial for \$1.

REMITTANCES should be made payable to the BUTLER PUBLISHING Co., and when in sums of five dollars or less should be made by postal note, money order or registered letter.

THE POCKET RECORD AND VISITING LIST.

Two sizes. Prices to subscribers of THE REPORTER: For 30 patients a week (with or without dates), \$1.00. For 60 patients a week (without dates), . . . \$1.25. Prices to non-subscribers, \$1.25 and \$1.50 respectively.

THE MODEL LEDGER.

Physicians who keep their own books will find this of great value. Enables the Physician to make out his bills with great ease, and gives at a glance the amount earned, received and due in any quarter. Sample pages sent on application. Price, \$5.00.

SUGGESTIONS TO SUBSCRIBERS:

See that your address-label gives the date to which your subscription is paid.

In requesting a change of address, give the old address as well as the new one.

If THE REPORTER does not reach you promptly and regularly, notify the publisher at once, so that the cause may be discovered and corrected.

SUGGESTIONS TO CONTRIBUTORS AND CORRESPONDENTS.

Write in ink.

Write on one side of paper only.

Write on foolscap or legalcap paper.

Make as few paragraphs as possible. Punctuate carefully. Do not abbreviate or omit words like "the" and "a," or "an."

Make communications as short as possible.

NEVER ROLL A MANUSCRIPT! Try to get an envelope or wrapper which will fit it.

When it is desired to call our attention to something in a newspaper, mark the passage boldly with a colored pencil, and write on the wrapper "Marked copy."

The Editor will be pleased to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

LEADING ARTICLE.

IS GENIUS A DEGENERATIVE EPILEPTOID PSYCHOSIS?

A very interesting paper has recently been translated by Dr. James G. Kiernan, from Lombroso's "Men of Genius," entitled "Genius a Degenerative Epileptoid Psychosis." The author, Cesare Lombroso, contends that genius is a degenerative manifestation and supports his views by quoting many men of undoubted genius who exhibited also symptoms of psychical degeneration. Among others he mentions Tasso, Rousseau, Swift, Poe, Southey, Haller, Lenan, Kleist, Gerard de Nerval, Musset Murget, Mailath Praga, Lorani, the Chinese poet Li-To-Kai, Pascal, Ampere, Walt Whitman, Letzman, Dostoyewski and many others, all of whom exhibited, in addition to the genius which has perpetuated their names, various abnormal mental symptoms. Accordingly, Lombroso concludes that their genius was also the outcome of degenerative processes of the mind.

The author of this startling theory says: "From anatomico-biological analysis of the careers of sane geniuses, and those neurotic or insane, of their geographical distribution of the causes (often pathological in character) of their appearance, and of the evil inheritance discernible in their descendants, naturally arose the suspicion that genius has a degenerative origin. This suspicion, whose audacity at first repels, becomes more and more justified by the phenomena exhibited by genius. If the lives and works of the historically great morbid minds be examined, it is found that they, as well as the men who have passed through the glorious parabola of genius without demonstrable mental taint are distinguished by many traits from ordinary men." Succeeding this statement, Lombroso goes on and quotes extensively the lives and works of the men whose names we have mentioned to prove that they exhibited in various forms the symptoms of degenerative psychical changes, or, in other words, that they dif-

ferred from ordinary men sufficiently to render their mental operations pathological. The author, we think, has, in many instances, forgotten to take into consideration the environment of those whom he thus brings forward as examples of *pathological genius*, and has unconsciously measured them by the standards of our own times, thus characterizing as pathological mentality many who merely expressed ideas, which, in their age, were universally believed. For instance, he cites the belief of Pascal, that the contact of a relic was able to cure lachrymal fistula as an evidence of unbalanced mentality, but in his time such ideas were very common, and even in our own times, as the translator aptly remarks, not a few persons entertain the same kind of ideas. Another example adduced by Dr. Lombroso we would with Dr. Kiernan object to as inadequate, viz.: Newton is called insane for writing to Bentley as follows:

"By the law of attraction the elongated orbit of comets is explained, but God alone can explain the lateral difference of the almost circular planetary orbit." Lombroso characterizes this as a very singular argument, as has been said by Arago, which places God at the limits where science has not penetrated, and Dr. Kiernan in a footnote justly remarks that this does not differ "from the placing of God in modern times as the limits of the knowable." Many other instances the author has collected from the great geniuses of the world's history seem to poorly support the ingenious and very taking theory which Lombroso has formulated definitely in his very interesting paper. If space permitted we think it possible to enumerate from historical literature a large majority of men of genius, in whom genius was not an expression of morbid mental action, and until better proof than Lombroso's sweeping statements is forthcoming, we prefer to regard genius as a physiological, and not as a pathological manifestation. For opposite views regarding this subject we would refer the reader to Lombroso's paper (*Alienist and Neurologist*, July, 1891), and to a paper by Dr. Kiernan (*Alienist and Neurologist*, Vol.

VIII), in which he says: "Genius is not a product of morbid mind. In the exceptional instances where the two co-exist the genius is evidence of a healthy, conservative element, struggling with the incubus of disease."

BOOK REVIEWS.

A MANUAL OF HYPODERMATIC MEDICATION: THE TREATMENT OF DISEASE BY THE HYPODERMATIC OR SUBCUTANEOUS METHOD. By ROBERTS BARTHOLOW, A. M., M. D., LL. D. Fifth Edition; Revised and Enlarged. J. B. Lippincott Company, Philadelphia, 1891.

It is almost a matter of supererogation to review this work, which has already been so favorably received by the profession, and whose author is so widely and favorably known. However, the increased knowledge and practice of the methods described by the author must advance the cause of scientific medicine, and if the time is coming when additional accuracy in the diagnosis and treatment of disease shall demand the more frequent use of the active principles or concentrated preparations of individual drugs, then the study of this book will hasten that day's advent.

By the hypodermatic method the characteristic action of single remedies is manifested, and the observant physician gains both in the study of his cases and the accuracy of his subsequent dosage. It would often be of undoubted advantage to many of us if we were more familiar with the subcutaneous use of remedies, and our success in many cases would often be the more apparent.

The present edition has been enlarged to the extent of about two hundred additional pages, and many of the articles in the preceding edition have been revised or entirely rewritten. As the author remarks: "The additions had become the more necessary because of the increasing importance of the hypodermatic method since the germ theory has so closely occupied the etiological field. It is by means of the injection instrument that in so many instances pathogenic organisms can be reached and effectively treated."

Picrotoxin for Night Sweats.—Picrotoxin is one of the best remedies for *night sweats* of consumption; one dose of $\frac{1}{16}$ or $\frac{1}{8}$ grain taken at night generally prevents perspiring for several nights.

PERISCOPE.

THERAPEUTICS.

TREATMENT OF TYPHOID FEVER.

M. Hayem (*Concours Médical*) gives, in one of his lessons on therapeutics, a new method of treatment of typhoid fever, which he has used with excellent results for several years. It consists in the exhibition of lactic acid as an intestinal disinfectant, and as a means of controlling the diarrhoea. He rejects all internal antipyretics, but reserves the use of baths. Lactic acid, with or without baths, according to the indications, is the regular treatment followed by M. Hayem. He prescribes the acid in the form of lemonade:

R Acidi lactici.....3iv-vj.
Syrupi simplicis.....3vss.
Aque.....3xxvij. M.
Sig. To be taken in the course of twenty-four hours.

If there is gastric intolerance, the lemonade may be diluted with seltzer-water.

In slight cases, M. Hayem prescribes 15 grammes (3iv) of lactic acid daily. When the evening temperature reaches 40° C. (104° F.), the dose is increased to 20 grammes (3v). In grave cases, with hyperpyrexia, 20 to 25 grammes (3v to vj) of lactic acid are given with cold baths (20° C. —68° F.), or baths in water gradually made cold. Brandy is given if adynamia is present. When the fever declines, the daily dose of lactic acid is gradually diminished, but is given in daily doses of 5 grammes (gr. lxxv) even during the first days of convalescence.—*Journal d'Accouchements*, Aug. 15, 1891, p. 191.

TREATMENT OF MIGRAINE.

In the *Archiv. für Psychiatrie*, Band xxi, Heft 1, Dr. Nefel has a paper on this subject, of which an abstract appears in the *Neurologische Centralblatt*. He regards the condition as a vaso-motor neurosis, but has nothing new to say about the etiology. As to treatment between the attacks, the circulation must be carefully attended to and kept active. Constipation must be got rid of, which is best effected by the use of diminishing doses of mineral waters and by the use of electricity to the abdomen. Muscular exercise must also be prescribed, and subsequent temporary rest, and nothing should be eaten or drunk until at least half an hour later. Then a cup of freshly boiled water, he says, will be found wonderfully

refreshing. The systematic use of electricity to the head is strongly recommended, and Dr. Nefel finds that in some cases the constant current, in others the interrupted, is beneficial. For the attacks themselves electricity also is recommended, together with ergotin for plethoric patients and salicylate of soda for anæmic sufferers, or a large dose of quinine for either class.—*Lancet*.

BROMIDES IN EPILEPSY.

While bromides remain the sheet-anchor of physicians in the treatment of epilepsy it cannot be said that success always results, a circumstance probably due to the fact that the course of epilepsy is often neglected. But according to Poulet better results are obtained by combining bromide with calabar bean, as in the following formula:

R Bromide of potassium.....3ij.
Tinct. of physostigma (1 to 10).....3ss.
Water to.....3vij.
Mix.

The dose of this is a tablespoonful daily, gradually increased to two tablespoonfuls. The best plan, however, is to give a teaspoonful three times a day gradually increasing the dose. Cases which have been treated consistently with the remedy for several months to a year have completely recovered, the only change in the treatment being that in cases where the heart was affected, digitalis was combined with the bromide.

TREATMENT OF ACUTE TORTICOLLIS.

According to Professor Phocas, of Lille (*Rev. des Mal. de l'Enf.*, October, 1891) acute torticollis is far more common in childhood and youth than in adult or old age. He recognizes two main varieties: (1) acute torticollis following immediately a sudden movement of the head, and due to sprain of one or more articulations of the cervical vertebrae—acute traumatic torticollis; (2) acute torticollis following exposure to cold, and due to slight cervical arthritis or to muscular rheumatism—acute rheumatic torticollis. In a few cases the acute traumatic variety may be due to partial rupture of muscles. In either of the two above-mentioned forms clonic contractions may be superadded to the tonic contracture. The muscle involved primarily is usually the trapezius. As to treatment, hot applications are the best anodynes; massage of the contracted muscle is a more effectual remedy, and often gives immediate relief, but M. Phocas recommends

particularly the application of a collar in the following manner. The patient is placed in a Sayre's suspension apparatus as for the treatment of cervical caries; he is then very slowly suspended partially. In this way the muscles are uniformly stretched, and their resistance gently overcome with little or no pain. A collar of moistened millboard is now applied and retained in place by a few turns of bandage. The patient remains in the apparatus about ten minutes more, and when liberated is free from pain. In one case the collar was removed on the next day, and the symptoms had all disappeared.—*Brit. Med. Jour.*

ANTICYCLIC ACID: A NEW ANTIPYRETIC.

Müller (*Correspondenzblatt f. Schweizer Aerzte*, August 15th, 1891), of Tokio, recommends anticyclic acid as an active antipyretic. It is a white, fragrant powder, with a refreshing, acid taste, readily soluble in water, alcohol and glycerin, and is non-toxic. In a solution of 1:10,000 it is destructive of even the most resistant organisms. The solutions are clear and do not injure instruments. Administered internally in doses of gr. $\frac{1}{2}$, anticyclic acid proved exceedingly useful in cases of pneumonia, typhoid fever and articular rheumatism.

A CASE OF LOCOMOTOR ATAXIA SUCCESSFULLY TREATED BY SUSPENSION.

There seems to be a tendency in the profession, when a new therapeutic measure is introduced, to make it the fashion, and to use it in almost every disease which flesh is heir to. Thus often, because not all of these various conditions are benefited, we lose sight of the one for relief of which the measure was originally introduced and for which it may have proved beneficial, and it falls into more or less disrepute. Such has been the case with suspension as a remedy in posterior sclerosis; for, while originally introduced for the relief of that affection, it was not very long before it was used in almost all forms of nervous disorder. Now it is scarcely used at all. On reading the papers of Mendel, Weir Mitchell, Charcot, Dujardin-Beaumez and others of like repute, we find that, while the cases of paralysis agitans, neurasthenia, myelitis, etc., were not benefited, those of posterior sclerosis were to more or less extent.

It is the opinion of the writer that when men, such as above mentioned, report suc-

cesses with a remedy, it must possess merit, and his experience at the Dispensary for Nervous Diseases of the University Hospital confirms such opinions, in support of which he wishes to report the following case:

J. P., aged 39, married, and a member of the Philadelphia Fire Department, presented himself at the Dispensary on May 27, 1890, and gave the following history:

He had never had any illness, excepting syphilis, acquired thirteen years ago, but has suffered from exposure and a rather unusual series of accidents incurred in the line of his duties as a fireman. In 1876 was knocked from a roof to the ground by being struck in the back by a falling flagpole. In 1878 fell from a third-story window to the ground, and in January, 1885, fell through three floors, striking upon his back, and was buried in the debris for twenty minutes. The next was in June, 1889, when he sustained severe burns, in addition to a fall of about twenty feet.

It was after the fall in 1885 that he first noticed anything wrong with himself, suffering for some time after from tingling and numbness in the legs and arms, and some difficulty in walking. This improved somewhat for a time, but he has "never felt right since." About two years ago, considerable difficulty in coming down stairs quickly or in going up ladders was noticed. This kept growing worse until, at the time of his first visit, he was afraid that he would be obliged to give up his position. He then felt as if he were walking upon cushions, and his greatest difficulty in walking was at night. Upon examination, the knee-jerks were found to be absent; sensation delayed in the legs; gait ataxic, but not markedly so; station with eyes closed very poor. There was also some loss of co-ordination in the upper extremities. There were no typical ataxic pains, but had been troubled for some time with what he termed dull rheumatic pains in the legs. Sexual power was not impaired. The eyes were, unfortunately, not examined.

Suspension, by the means of the Weir Mitchell apparatus, was at once begun, being practiced every other day, commencing at first with two minutes, and gradually increasing to three and a half. No disagreeable symptoms were ever experienced. Improvement was noticed in the course of a month, and continued slowly until January, when he had an apparatus put up in the house where he was stationed, and continued the suspension, employing it daily. I saw him again about a month ago, and found him in the following condition: He had

gained in weight twenty-five pounds, and felt considerably stronger; station and gait were much improved, and he was able to run at quite a fair rate of speed; was also able to walk a chalk-line drawn upon the floor; the knee-jerks were still absent. His comrades informed me that, before commencing the treatment, they were often obliged to wait a time to enable him to get upon the apparatus when answering an alarm, but that now he was almost as quick as the best of them. It is proper to add that at first he was placed upon anti-specific treatment, but he would not take the medicine, and it was discontinued in a week's time, since which suspension has been the only treatment employed.

Other cases have been also thus treated at the Dispensary, always with some benefit; but as internal remedies were also used, there is, of course, some doubt as to which was the effective agent.—DR. CHAS. S. POTTS, in the *Univ. Med. Mag.*

THE TREATMENT OF SYPHILIS BY DEEP INJECTIONS OF CORROSIVE SUBLIMATE; REFERENCE TO INFLUENCE OF MERCURIAL INJECTIONS ON BODILY TEMPERATURE AND WEIGHT.

Dr. Zělëneff, of Kiev, publishes (*Meditsinskoi Obozrenië*, No. 3, 1891, p. 290,) a careful report on 104 cases of syphilis treated by him in Professor M. I. Stükovenkoff's clinic with corrosive sublimate after the formula: \mathfrak{R} .—Hydrargyri bichloridi corrosivi, vaselini, ana. M. f. ung. cui adde olei vaselini ut f. l. a. emulsio contin. 22 per cent. hydrarg. corr. subl. D. S. To inject from one-half to two grains of the sublimate. In some cases the following "suspension" was employed: \mathfrak{R} .—Hydrargyri bichloridi corrosivi gr. xxxvi.; olei vaselini 1 oz. M. D. S. To inject one grain of the sublimate. In either case the emulsion was warmed in hot water, and then thoroughly shaken just before using. In the case of half grain doses the injections were repeated once every four days; in that of one grain doses every six; and in that of two-grain every ten. In all, 915 injections were made; 31 patients being treated with half-grain doses, 33 with one-grain ones, and 40 with two-grain ones. The following are the principal deductions from the clinical inquiry:—

(1) In the case of two-grain injections all syphilitic manifestations disappear on an

average after five or six *séances*: in that of one-grain ones after eight or nine; and in that of half-grain doses after twelve or fourteen.

(2) A local reaction (at the site of the injection) is mostly but trifling, in which regard the sublimate injections closely resemble those of salicylate of mercury (*vide* the *British Journal of Dermatology*, June, 1889, p. 276). Some pain was observed only in 32 per cent. of cases treated with half-grain doses, in 19 of those treated with one-grain ones, and in 27.5 of those treated with two-grain ones. Only once a two-grain injection caused a rather vivid pain, which appeared on the third day, being accompanied with some rise of the temperature (37° C.). Infiltrations occurred only on eight occasions (twice after half-grain injections, twice after one-grain ones, and four times after two-grain). They were always but slight, and speedily underwent resorption.

(3) As to the influence of the injections on the bodily weight, the latter fell in 39 out of 74 patients examined, while in 35 it increased during the course. Of the former 39 cases, in 10 some complications (stomatitis, diarrhoea, etc.) were simultaneously noticed, while in the remaining 29 (39 per cent.) the fall proceeded without any concomitant phenomena of the kind. For the sake of comparison, the author also examined (a) 21 cases treated by injections of suspended yellow oxide of mercury or benzoate of mercury; in 11 cases (of which one was complicated) the weight sank, while in 10 it increased; and (b) 60 cases treated with injections of solutions of mercurials (corrosive sublimate, succinimide, or benzoate of mercury); of them, in 32 the weight decreased, of which number in nine some complications existed, but in the remaining 23 (38 per cent.) no such cause could be made out. The comparative observations showed further that (a) injections of mercurial solutions gave rise to a more considerable loss in the body's weight than mercurial "suspension"; (b) gain in the weight was generally lesser than the fall; (c) in the beginning of syphilitic eruptions the patient's weight sank but rarely, and then mostly in the presence of such complications as fever, subjective disturbances, etc.

(4) As to the bodily temperature, in 40 per cent. of cases the first injection of the sublimate "suspension" is followed by a rise varying from 37.6° to 38.5° C. (mostly up to 37.7° C.) and disappearing on the next day. Subsequent injections do not make any impression on the temperature. The

febrile rises do not manifest any influence on the intensity of syphilitic lesions.

(5) Of toxic phenomena there may be sometimes observed gingivitis (it occurred in seven patients, one of whom was treated with half-grain doses, three with one-grain ones, and three with two-grains); salivation (one case of three days' duration treated by two-grain doses), stomatitis ulcerosa (one case of seven days' duration, the affection developing after fifth injection of two grains); abdominal pain and diarrhoea (twelve cases, in three of which half-grain doses were employed, in three one-grain ones, and in six two-grains; in one of the latter cases blood-stained stools occurred.)

(6) The elimination of mercury through the kidneys proceeds much in the same way as in the case of yellow mercurial oxide (*vide* Dr. Zélèneff's paper in the *British Journal of Dermatology*, June, 1890, p. 190). That is, distinct traces of the metal appear in the urine in about twelve hours after the first injection; after each subsequent dose the proportion of mercury markedly increases for from one to three days.

(7) On the whole, injections of suspended corrosive sublimate in large doses afford a convenient and energetical method of treatment of syphilis. Its only drawback is constituted by occasional irritant effects on the gastro-intestinal tracts.

THERAPEUTIC USES OF INTRAVENOUS INJECTIONS.

The therapeutic uses of intravenous injections has been ably discussed by M. Mayet before the Lyons Medical Society (*Lyons Médical*, May 10th, 17th, 24th, 1891). Intravenous injections may be useful for three distinct purposes: (1) To make up a deficiency of the quantity of circulating liquid, the result of a considerable loss either of blood as a whole (hæmorrhage) or of its fluid portions (cholera, etc.). (2) To favor the elimination of certain toxic principles—namely, to wash out the organism—by largely increasing the quantity of liquid passing out by the kidneys. (3) To introduce various drugs into the circulation, in order to obtain a prompt action. M. Mayet considers that injections employed in the first manner act principally by re-establishing the mechanical conditions of the circulation, whether transfusion be employed or an artificial liquid injected. In cholera the blood loses a large portion of its watery constituents, and becomes highly concen-

trated; the introduction of liquid acts here in two ways, by increasing the fluidity of the blood, and by restoring its bulk. Undoubted successes have been in many cases obtained by adopting this method. As to the liquid to be employed, there has been much difference of opinion. What is least likely to be harmful to the corpuscles or the organism generally? Water does not appear to be highly suitable, owing to its known poisonous effect on proteid material, and an "artificial serum" has not in the author's hands yielded better results than simple saline solution. The use of defibrinated blood is doubtful, it being very uncertain whether the foreign corpuscles, ferments, etc., may not exert a harmful influence. Probably the most satisfactory fluid in every way is water containing from 0.5 to 0.6 per cent. of sodium chloride; that has little action on the corpuscles or on the vessels, is easily prepared, and rapidly miscible with the circulating blood. The mode of injection is important. Theoretically, a given vessel should never contain at any moment a quantity of foreign liquid more than equal to that of the contained blood. Thus, if the median basilic vein be employed, this quantity would be about one ounce per minute. In practice, however, not much harm arises from the injection of as much as ten ounces in six minutes, and this should generally be the maximum quantity for a single injection, save in cases of extreme urgency, in which the relative emptiness of the vessels is the chief danger. The quantity injected in a given time should also be regulated by the extent to which the eliminative function of the kidneys is impaired, a point to be specially remembered in the case of cholera. Danger of phlebitis is inconsiderable if proper precautions be adopted in operating. The next use of intravenous injections—to favor the elimination of certain toxic principles—is one which has been much studied of late, especially in its application to uræmia. Its employment in man has been limited, but Dastre and Loye showed its practicability in 1888, and pointed out the necessity for extreme slowness in injecting and for regulating the quantity used by the rapidity with which elimination, which takes some time before commencing, is carried out. This application of intravenous injections is suggested by M. Mayet as a means to be adopted in poisoning by "blood poisons" such as arsenical compounds, arseniuretted hydrogen, sulphuretted hydrogen, chlorate and nitrate of potash, in acute poisoning by salts of mercury and lead, and with some

chance of success in poisoning by alkaloids and digitalis. It might also be successful even in conditions due to presence in the blood of toxines, ptomaines, etc., the results of bacterial growth, and in such conditions as uræmia. The action in cholera is probably of this kind, the products of the comma bacillus being dissolved and eliminated at the same time as the bulk of the circulating fluid is restored. The introduction of drugs directly into the circulation is more doubtful ground, and is a proceeding the advisability of which has been with some reason called in question. Without doubt this is the most certain and rapid method of administration, and the one generally preferred in physiological experiment, as one can be quite sure that the action of the drug will be quickly and surely produced. Of course the hypodermic method is generally sufficiently rapid, but some drugs are unsuitable either from the quantity required, or from the fact that they produce serious inflammation (for example, chloral). Occasionally, too, as after swallowing soluble poisons, it may be desirable to produce emesis by apomorphine more rapidly than it would occur after hypodermic injection, and in these circumstances M. Mayet would be inclined to inject the drug, in very weak solution of course, into the veins. The objections which have been urged against the method are that there is a risk of (1) unduly violent action, and (2) of the formation of clots in the vessel which may become carried as emboli into the general circulation. Both these dangers can, however, be obviated by using sufficiently dilute solutions, and by injecting very slowly. The method of injecting will be the subject of a future paper, as well as the advantage of the employment of chloral, etc., by intravenous injection in cases when swallowing is impossible.—*Brit. Med. Jour.*

MEDICINE.

SPASMODIC SCIATICA.

M. H. Lamy (*Le Progrès Médical*) reports 2 cases of spasmodic sciatica. Charcot, Babinsky, and Ballet have taught us that deviation of the spine is a frequent result of sciatica; they tell us that these deviations always consist in scoliosis, with an inclination of the vertebral column on the side opposite to that affected with sciatica. However, Brissaud (*Archives de neurologie*, January, 1890) has demonstrated that the scoliosis may be homologous, that is, with an

inclination toward the pelvis on the same side as the sciatica, and that this is observed in those cases where the sciatica is of a spasmodic nature.

The two cases recently published by M. Lamy are examples of homologous scoliosis following spasmodic sciatica. In both cases the patients had an apparent shortening in the affected limb, amounting in one case to 6 centimetres (2½ inches), and an apparent enlargement of the buttock on the same side. The apparent shortening of the lower limb was attributed by M. Lamy to the spasmodic retraction of the muscles supplied by the lumbar and sacral plexuses,—a retraction caused by pain. The enlargement of the buttock, the author thinks, may be explained by the rotation of the pelvis produced by muscular spasm; the rotation having for an effect the carrying backward of the trochanteric region of the affected side.

GRAFTS AND INOCULATION OF CANCER IN MAN.

La Pratique Médicale, Paris, June 30, 1891, in an editorial, strongly denounces the experiments of certain foreign surgeons in regard to the grafting and inoculation of cancer in man. It claims that such experimentation should be as justly a criminal offence as a wrongly-written prescription, and advises that surgeons desirous of knowledge in this direction should make the experiments on their own bodies. In the same issue is published an account by M. Cornil of two experiments in cancer-grafting made by a foreign surgeon whose name is withheld. The first case concerned a woman with a large tumor of the breast, of which after it was extirpated, a very small slice was inserted under the skin of the opposite perfectly normal breast. The incision healed by first intention, but soon an indurated swelling about the size of an almond appeared and was removed. The original and the grafted tumor on examination showed exactly the same sarcomatous structure. The graft showed quantities of cells in the stages of karyokinesis. The second case was one of tubular epithelioma of the breast, also in a woman. The same experiment was tried, with the same result, but the woman refused a second operation. From these facts, Cornil draws the conclusion that grafting of cancerous or sarcomatous tissue is perfectly possible in persons bearing the tumors; that the graft will become fixed, will develop and invade the normal tissues.—*Univ. Med. Mag.*

CONGENITAL RICKETS.

At a meeting of the Section on Orthopedic Surgery of New York Academy of Medicine, Dr. T. Halsted Myers presented a case of marked rickets, in which it was stated by the mother that the greatly enlarged epiphyses of the tibiae, femora and radii were present when she first examined the child a few days after birth. The sternum at that time was also abnormally prominent. The mother had been in good health during the gestation; the father was also healthy. No specific history could be obtained. The child, six years of age, presented all the deformities of rickets in a marked degree, except that the head was well shaped and that there was a marked increase of the normal dorsal curve of the spine, rather than the dorso-lumbar kyphosis usually found in these cases. An unusual degree of permanent knee and hip-flexion also existed, and the patient, when resting, assumed the hand-to-knee position of Pott's disease. The epiphyseal tenderness seemed to indicate an active stage of the disease. After being nursed nine months, the child had a mixed diet, not especially starchy or lacking in animal fats.

ANTIFEBRIN BY BROKEN DOSES.

Dr. M. A. Favrat reports (*Inaug. Disser.*) on the use of antifebrin in broken doses at the *Medical Clinic* at Berne. He is opposed to the doctrine of the curative effect of fever, of which there are no positive proofs. The whole doctrine is based upon bacteriological researches on the influence of elevated temperature on bacteria-cultures. It has found one support in the lack of success had with the modern antipyretics, which have brought discredit upon medicinal antipyresis. But these failures are positively referable, for the greater part to the fact that the antipyretics are placed into the practitioner's hands without sufficient knowledge of their modes of action, their accessory effects, and their drawbacks. A conscientious investigation—the author continues—must determine to what extent the drawbacks of individual antipyretics can be eliminated by different methods of employment. How variously the action of antipyretics manifests itself, is shown in the case of Thalline, which, in large doses, is an entirely worthless medicament, while in repeated small doses, it is one of the best antipyretics we possess.

Dr. Favrat asserts that it is a universally valid rule to administer antipyretics which

act rapidly, in fractional doses; those slow in action,—as quinine, for instance,—on the other hand, in large single doses. This it was which induced Prof. Sahli to employ antifebrin—a prompt and reliable remedy, but one which under certain circumstances manifests strong drawbacks—in small, frequently repeated doses, instead of the customary large single doses.

The experiments made at the *Berne Clinic* on 11 patients (8 with typhoid fever, and 3 with phthisis) with 1090 doses of antifebrin have shown that “continual antifebrinization”—as the administration of antifebrin in small frequently repeated doses is called—is an agreeable and mild method of antipyresis, possessing material advantages over the modes of employment hitherto in vogue. It was demonstrated that 0.05–0.1 gramme [$\frac{1}{4}$ – $\frac{1}{2}$ grains] doses of antifebrin, repeated hourly, completely suffice to materially depress the fever in both the acute period and the defervescent stage of typhoid fever. On the other hand, the action of the small doses administered at intervals of 2 hours, is not sufficient to effect a decided depression of temperature in the acute stage; but in the defervescent stage, it may suffice. True it is, that the fever cannot be entirely dispelled by these small doses; but it is moderated, and the patient obtains relief, subjectively.

The hectic fever of consumptives can also be successfully combated and relief be afforded to the patient, by repeated doses of antifebrin. The remedy acts better the higher the temperature. In consumptives a dose of 0.05–0.1 gramme [$\frac{1}{4}$ – $\frac{1}{2}$ grains] often suffices to reduce the temperature more than 2° C [3.6 F] within 2 hours.

In 2 cases, chills, slight cyanosis and perspiration (several times) survived from this medication: however, these symptoms were far less pronounced than is the case with the customary large doses. There is no danger connected with these small doses, because it is within our power at any time to discontinue the antifebrin upon the slightest appearance of untoward accessory symptoms.—*Merck's Bulletin.*

THE NERVOUS TROUBLES OF URÆMIA.

Lancereaux, who has written much and well on the nerve-intoxications, discusses the Nervous Troubles of Uræmia in his recently published “*Leçons de Clinique Médicale.*”

The nervous perturbations in uræmia have not the same significance as the digestive. The gastro-intestinal phenomena, in fact, are,

at least at their onset, compensatory. They present a character of utility, even to some extent of necessity, which must be recognized, and which regulates therapeutic interference. The nervous accidents, on the contrary, constitute always symptoms of ill omen, which must be combated as soon as possible. Moreover, the disorders of the first category result from an elective action on the digestive mucosa, the excretory function of which is solicited by the afflux excrementitious principles. There is nothing like this in the reaction of the nervous system, which is simply encumbered, like all the other tissues, by the products of disassimilation; only it reacts more energetically by reason of its special excitability.

Among the accidents purely nervous, we may first isolate and describe apart the group of *cardio-pulmonary accidents*.

In dyspnoic uræmia the thoracic organs are not directly affected. They only give expression to the functional disorders of the nervous centres.

Dyspnoic uræmia presents three principal varieties: Simple dyspnoea, paroxysmal dyspnoea and spasmodic dyspnoea. Simple dyspnoea is characterized by acceleration and variations of extent of the respiratory movement and by the breathlessness which follows the least effort, even walking. Examination of the mode of respiration always shows a predominance of the diaphragmatic type. This is, moreover, the characteristic of uræmic respiration in general; it is almost exclusively diaphragmatic. The costal type is seen only in uræmic patients who have at the same time material lesion of the lungs or heart. The simple dyspnoea of uræmia patients is sometimes accompanied with laryngeal phenomena, hoarseness of the voice and inspiratory sibilance, which may even simulate serious obstructive disease of the upper air-passages, so as to seem even to call for tracheotomy.

The paroxysmal dyspnoea of the uræmic has been long known as the *Cheyne-Stokes* respiration. It consists in the succession, regular and periodical, of a phase of apnoea or pause, and of a phase of dyspnoea in which the inspirations, at first infrequent, short and superficial, augment gradually in amplitude, become more and more frequent, profound and noisy, then decrease progressively to another pause. The period of apnoea is generally limited to thirty or forty seconds; the complete cycle has a duration of several minutes. The circulation is always more or less embarrassed, the lips are cyanosed; the pupils are contracted during the pause, to

become dilated when the respiratory movements are resumed; psychical faculties are more or less obtuse. Apart from the probable influence of cardiac steatosis and certain organic cerebral affections in occasionally causing this form of dyspnoea, it is generally renal and uræmic in its origin, and one or two energetic purgatives often suffice to cause it to disappear for a time.

Spasmodic dyspnoea much resembles spasmodic asthma, and hence has been often described as uræmic asthma. It comes on suddenly, like an attack of purely nervous asthma, and generally without any appreciable exciting cause. It consists in the sensation of a distressing anguish, which obliges the patient to sit up in bed, to cling hold of surrounding objects, and to make painful efforts to breathe. The ordinary description of an asthmatic attack is here applicable only during the relaxation phase; expiration is slow, prolonged, but not wheezing; rarely sibilant and sonorous rhonchi are audible to auscultation, and the paroxysms are not followed by expectoration. Vomiting often precedes or follows the attack; the latter may last half an hour or even an hour and be repeated several times during the day and night.

Uræmic dyspnoea is, in general, much benefited by the exhibition of drastic purgatives.

The *circulatory disturbances* observed in uræmia consist in palpitations more or less intense of the heart or even of the blood-vessels. These irregular and intermittent palpitations are felt during rest, and are often aggravated by movement. They are a frequent cause of insomnia. The pulse is ordinarily accelerated during the crises of uræmia, although it may be preternaturally slowed, as before puerperal or scarlatinal convulsions; here we should interpret the phenomenon as due to a perturbation in the innervation of the vagus.

The *cerebral accidents* of uræmia affect the three great functions of sensibility, movement and intelligence, which are singly or simultaneously disturbed.

The sensory disorders consist in subjective sensations of pruritus, of numbness and of pain in different parts of the body; lastly, in temporary visual disturbances.

The pruritus is especially observed in patients whose renal lesions are dependent on generalized arterio-sclerosis, and as this latter alteration is always linked to troubles of the innervation, we may well ask if the itching is not rather the effect of the general morbid state which engenders the renal

affection than of this affection itself. These itching sensations have for their more special seat the genital organs.

Amaurosis sometimes accompanies the uræmic crisis, appearing suddenly at the onset, continuing through the attack, and disappearing with it. The vision is obscured or even almost abolished; objects appear as through a mist. It is the result of a simple functional disturbance. *Diplopia*, *hemipopia* and even *hemeralopia* have also been noticed.

Cophosis is also an occasional symptom of uræmic poisoning.

The *motor disorders* of uræmia are less complex than the sensory. They manifest themselves under the form of contractures, convulsions, and even of paralyzes.

Contracture is relatively rare. In the majority of cases, when present, it is fugacious and associated with a transient paralysis or with eclamptic paroxysms. When isolated, it is generally localized in the muscles of the back of the neck, causing a stiffness and a slight bending backward of the head; this is frequently strongly suggestive of meningitis.

Convulsions represent the most common type of the motor disorders of uræmia. They are partial or general. Partial convulsions consist in muscular twitchings, subsultus tendinum and convulsive shocks resembling electric shocks. General convulsions strikingly resemble the epileptic seizure; they are known under the name of uræmic eclampsia, of which puerperal convulsions are the type. Uræmic eclampsia with general convulsions is exceptionally met with in interstitial nephritis linked to general atheromasia, while at the same time persons suffering from this form of nephritis form the majority of the uræmic.

Uræmic paralyzes affect generally a great number of muscles, and are confined to one-half of the body (uræmic hemiplegia). They ordinarily appear in the course of nephritis dependent on arterio-sclerosis. This kind of paralysis succeeds pseudo-apoplectic attack. The case is supposed to be one of cerebral hemorrhage; but if the patient dies, the autopsy discloses only atheroma of the vessels of the encephalon. When the patient survives the attack, he is found to be hemiplegic; but to the surprise of his medical attendant this "wears off" after a few days; the patient regains perfectly the use of his members. Later on there comes another attack on the same side or on the opposite side. Such pseudo-apoplectic attacks are not rare in aged persons affected with arte-

rial nephritis. Raymond, Chantermesse and Tenneson, besides Lancereaux, have reported cases of the kind.

Other morbid sensations are those formations and pricklings of the limbs which are observed especially in arterial nephritis, and which may be due to an imperfect sanguineous irrigation. The only *articular* pains which it is possible to ascribe to uræmia are those erratic, flitting pains of the Brightic, and which yield to purging; these evidently originate in the nervous system, and not in any material disorder of the joint. To the same category belong those painful cramps of which some patients complain, and which are seated preferably in the muscles of the legs.

As for the *digitus semi-mortuus* phenomenon (the dead-finger sensation), which is by some writers ascribed to uræmia, it is a symptom common to the neuropathic and atheromatous.

Cephalalgia is an ordinary symptom of uræmic poisoning, and appears in the form of a simple headache, or of pains which bear a great resemblance to migraine. The first of these forms is continuous, with paroxysms which may come on in the daytime, but oftener supervene in the night. Moreover, nocturnal exacerbations are almost pathognomonic. The pain has for its seat sometimes the frontal region, sometimes the occipital, and reveals itself by a sensation of horrible discomfort, of weight, of pressure, rather than of painful lancements. It is rarely located in the temporal region; oftener it occupies the entire head, and is compared to a hoop encircling and compressing the cranium, or a tight and heavy helmet.

The intensity of the headache (causing outcries), joined to the nocturnal paroxysms, reminds one of the osteocopic pains of syphilis. If in doubt, the result of treatment will sometimes clear up the difficulty; the anti-syphilitic treatment (iodide of potassium, minute doses of calomel) will be found inefficacious, while a few purgative doses of Carlsbad salts will give speedy and magical relief.

The *migrainous* form is intermittent, and supervenes by crisis of a duration which varies from several hours to several days. Sometimes unilateral, it is oftener frontal. The pains are of a rending, grinding, crushing, compressing character; arterial beatings (aggravating the pains) and lancements (so common to migraine) are rarely complained of. The pain is exceptionally accompanied with nausea and vomitings.

Vertigo is a symptom which is quite often observed in uræmia; it is not always, however, due to uræmic poisoning, being frequently dependent on a morbid state of the cerebral arteries.

Aphasia is rarely witnessed in uræmic poisoning; when supervening, it appears at irregular or periodical intervals, and is transitory.

Uræmic coma is relatively common. It is generally associated with other uræmic manifestations; it succeeds convulsions and frequently accompanies paralyzes; but in some cases it remains isolated, constituting the sole disorder. There are all grades in the depth of the somnolence; sometimes the patient lies in a state of semi-consciousness for entire days, replying in monosyllables when spoken to in an earnest tone of voice. Seated in his arm-chair or lying in bed, generally a prey to a painful dyspnœa, the patient utters complaints or groans when he awakes, and speedily relapses into his hebetude.

At other times the coma comes on suddenly, and is much more pronounced. The patient is struck down with an apoplexy, and becomes insensible to all excitations; his face is pale, the pupils are immovable, the pulse is slowed, the respiration irregular sibilant or stertorous, sometimes puffing. Muscular resolution is then general, the limbs when raised fall back flaccid, as if they were paralyzed. Death may take place during a first attack. Edema of the cerebrum is sometimes met at the autopsy, but it may be lacking; or the patient may come out of his coma, manifest some hebetude and obtusion of the intellectual faculties, but respond to questions and take nourishment; then, after a few hours, a day or two, or even several weeks, he again lapses into the same apoplectic inertia, and may have several such attacks before he dies.

The diagnosis is always difficult in cases of this kind. The absence of reflexes speaks in favor of uræmia. The examination of the urine and the state of the temperature have a great semeiological importance and a real value from the point of view of prognostic and therapeutic indications.

Uræmic madness or delirium is a rare symptomatic manifestation of renal insufficiency. When it makes its appearance it is generally in the course of interstitial nephritis, especially of that form which is dependent on arterio-sclerosis. Uræmic delirium has, however, been witnessed in scarlatinous nephritis, and it is probable that

many observations of puerperal mania belong to this category.

When uræmic delirium is associated with other troubles, nervous or digestive, it is habitually mild, calm and transient, rather than noisy and persistent; hence it may pass unperceived, and generally it has but a secondary importance. If, on the contrary, this accident is the predominant phenomenon and sums up in itself all the uræmic disorders, it is more pronounced, and presents particular characters which it is absolutely necessary to know well. In fact, it is not enough that there should be delirium and a renal lesion to constitute *uræmic insanity*; this delirium should have a special behavior which distinguishes it from other forms of delirium.

Rarely it bursts forth all at once; almost always it is preceded by insomnia, change of disposition, by melancholy or by impatience, by headache or dyspnœa, or other signs of urinary insufficiency. It is active, boisterous, rather than depressive; hence its type resembles acute mania.

Hallucinations, when they exist, affect sight or hearing, and are rather terrifying than gay. The patients believe that plots are formed to injure them, to poison them, and in certain cases they refuse all food.

Uræmic delirium has remissions and paroxysms, rarely a uniform and continuous progress. It may last for months; but its duration is ordinarily shorter—a few weeks or only a few days—and, like the convulsions and coma of uræmia, it generally kills the patient unless it is met by the appropriate treatment. Patients affected with it have frequently been sent to asylums and put under restraint. This is bad practice, and may be followed by fatal results.

Uræmic delirium presents serious diagnostic difficulties, arising from the morbid predispositions which in an albuminuric patient, as in any other person, may be awakened by various exciting causes. It is conceivable that an alcoholic patient affected with renal lesion may be taken with a delirium absolutely foreign to this lesion. It is the same with an individual who has antecedents of insanity in his family; hence it is important to have clearly in mind the characters of uræmic insanity if one would arrive at a correct diagnosis. These characters may be summed up as follows: Appearance of the delirium generally after well-known uræmic phenomena; maniacal exaltation with general incoherence, which may disappear at the end of several days or end in a dementia of short duration, in

coma, or, lastly, in death. We have here, then, a grave disorder, which we should know how to diagnosticate in order to treat it properly and to avoid the disaster of committing to an asylum the unfortunate victims of this form of mental alienation.—*Jour. Nerv. and Mental Disease.*

SURGERY.

SURGICAL TREATMENT OF INTUSSUSCEPTION.

The following conclusions are reached by Dr. N. Senn, in an article in the *Canadian Practitioner*:

1. Intussusception of the bowels is a strictly surgical affection, and should be treated as such from the beginning, on the same ground as a strangulated hernia.

2. Immediately after the accident has occurred peristaltic action should be arrested by emptying the stomach by an emetic or irrigation, by suspending stomach feeding, combined with the administration of opiates in sufficient doses to procure rest for the bowel at and above the seat of invagination.

3. Prompt arrest of peristalsis procure for the affected part the most favorable conditions to arrest further invagination and to effect spontaneous or artificial reduction.

4. Artificial means to effect disinvagination should be instituted as soon as this form of intestinal obstruction is recognized or even suspected.

5. Rectal insufflation of hydrogen gas or filtered air is the most efficient and safest procedure in reducing the invagination, and, if employed sufficiently early, will prove successful in the majority of cases.

6. Inversion of the patient and complete relaxation of the abdominal muscles by the use of an anæsthetic are important factors in rendering the inflation efficient.

7. Enterostomy and colostomy, according to the seat of the invagination, are only permissible if the patient's general condition does not warrant laparotomy.

8. Laparotomy in all other cases should be done as soon as the irreducibility of the invagination has been demonstrated by rectal insufflation.

9. In acute recent cases the swelling of the intussusceptum, caused by the circular constriction at the neck of the intussusciens, often proves a serious obstacle to reduction, and should be removed as nearly as possible by manual compression made direct

or over a large aseptic sponge before attempts are made to reduce the invagination by traction.

10. Reduction of the invagination is accomplished most readily by making traction in opposite directions upon the bowel, above the neck of the intussusciens, and upon the sheath below the apex of the intussusception, combined with pressure against the intussusceptum in a direction from below upwards.

11. If adhesions between the apposed serous surfaces of the inner two cylinders resist reduction, they should be carefully separated with a Kocher's director or a small pair of straight blunt-pointed scissors before traction is made.

12. After reduction has been accomplished the affected segment of the bowel should be carefully examined, and small patches of gangrene or rents of the peritoneal coat covered by stitching the peritoneum over them.

13. Recurrence of invagination is prevented most effectually by shortening the mesentery by folding it in the direction of the bowel, and fastening the fold in this position with a few catgut or fine silk sutures.

14. If the external surface of the bowel present evidences of gangrene, disinvagination should not be attempted, and in such cases a resection is absolutely indicated.

15. The resection, under such circumstances, should always include the whole intussusceptum, but only so much of the intussusciens as is threatened by gangrene.

16. If the continuity of the bowel cannot be restored by circular suturing, either on account of the difference in size of the lumina of the resected ends, or inflammatory softening the same object is attained in an equally satisfactory manner, and more safely, by lateral implantation or intestinal anastomosis.

17. If the invagination is not extensive, but irreducible, and the bowel presents no signs of gangrene, obstruction should be allowed to remain, and the continuity of the intestinal canal restored by making an anastomotic opening between the bowel above and below the invagination, by the use of perforated decalcified bone plates.

18. If the invagination is extensive, irreducible, and the bowel presents no indications of gangrene externally, the intussusceptum should be made accessible through an incision below the neck of the intussusciens and resected after securing the stump with an elastic ligature, after which the ob-

struction is permanently excluded by an intestinal anastomosis.

19. In irreducible colico-rectal invagination, or when this form of invagination has been caused by a malignant tumor, the intussusceptum should be drawn downward and removed by the operation devised by Mikulicz.

REMOVAL OF BREAST DURING HYPNOTIC SLEEP.

Dr. Schmeltz, of Nice, has recently recorded a case (*Gazette Medicale de Strasbourg*) in which he removed a sarcomatous breast during an anæsthesia caused by hypnotism. The patient was a girl, æt. 20, who was easily thrown into the hypnotic state. The operation was performed in the presence of Drs. Lauza and Barriera, and the entire organ, together with the aponeurosis of the pectoralis major was removed by the oval incision. Five drainage tubes were inserted and the wound was closed with thirty-two metallic sutures. The operation lasted an hour. The patient remained absolutely insensible, in a condition of the deepest anæsthesia, such as is only seen after large doses of chloroform. Dr. Schmeltz says: "I operated very slowly and quite at my ease; the patient even tried to encourage by her words; she seemed very gay, and laughed loudly from time to time as if to show that she felt no pain. In order to make the operation easier for me, she turned herself about, so as to place herself in the most favorable position, keeping her right arm stretched out so that no assistant was required to keep it steady." She was kept under observation the rest of the day, and having been told not to feel pain and to have a good night she obeyed these instructions in the most docile manner. The wound was completely healed on the fifteenth day. The only symptom worth mentioning, which Dr. Schmeltz observed in the patient during the operation, was great pallor of the countenance, without any dilatation of the pupil or weakening of the pulse. The tumor weighed two kilograms.

THE USE OF PLATINUM INSTRUMENTS IN OPHTHALMIC SURGERY.

Gruening, of New York, in a paper contributed to the last number of the *Archives of Ophthalmology*, refers to the use of platinum instruments in ophthalmic surgery, which he regards as very advantageous. He has used for the last twelve months a set of

instruments, composed of the following, a cystotome, an "iris reposer," a wire loop, a spoon, several straight and curved iris forceps, a fixation forceps, and a speculum. The platinum, alloyed, compressed by hammering, becomes very firm, and when polished is not blackened by the flame of a spirit lamp. The time, he says, required for the sterilization of a platinum instrument by imparting to it a white heat is but a small fraction of a minute, so that every instrument required for an operation can be prepared in a direct, simple, and thorough manner by the surgeon. After all, while admitting the certainty of completely sterilizing instruments by heat, a plan rendered possible by having them manufactured of platinum as suggested by the author, we are doubtful, in view of the satisfactory results which can be obtained in ophthalmic surgery, as far as suppurative processes are concerned, by the free employment of antiseptics, whether the necessity for using platinum instruments can be shown to exist.

A METHOD OF OPERATION IN POLYPI OF THE NASAL CAVITY.

Roman von Baracz, Lemberg (*Centralblatt f. Chirurgie*). The author refers to the favorable results following the method introduced by Furneaux Jordan (*British Med. Journal*, May 2, 1885), the fundamental principle of which consists of clearing the anterior naris by means of the formation of a triangular-shaped flap from the upper lip and wing of the nose, in order to gain access to the nasal cavity. The steps of Jordan's operation are as follows: A curved bistoury is introduced beneath the upper lip at the side corresponding to the polyp, passed perpendicularly until its point emerges into the nasal opening, and the upper lip cut through from behind forward. The cut edges of the upper lip are compressed. A long and pointed bistoury is introduced into the nasal cavity and an incision made, continuous with that just described and passing out through the dorsum nasi. In this manner the soft parts of the nose are separated in a longitudinal direction. A few strokes of the knife suffice to lift the flap thus formed and permit inspection in the nasal cavity. Should the opening thus made prove insufficient for the removal of the growth, which is accomplished by the finger, aided by knife and scissors, this may be enlarged by the bone forceps.

In 1888 König (*Centralblatt f. Chirurgie*, No. 10) called attention to a method quite

similar to Jordan's. The only essential difference between the method of Jordan and that of König consists in the use of the large sharp spoon by the latter for the removal of the tumor. In B's operation a combination of the two methods is aimed at by making a formal osteo-plastic resection of the nasal bone and the nasal process of the superior maxillary bone, and the removal of the growth by means of König's sharp spoon. The operation is performed under cocaine anaesthesia. It is claimed that no deformity results, and that the cicatrix is almost invisible.

GYNÆCOLOGY.

BACKACHE AS A SYMPTOM OF LOCAL DISORDERS.

So large a proportion of the female patients who present themselves in our consulting rooms, suffering from pelvic disorders, complain of backache in the sacral region, that Dr. W. P. Manton, (*Jour. Gynecology*) has interested himself in looking up the relation of this symptom to the conditions which physical examinations have shown to be present. At first, he attempted to arrange the results of these studies in a somewhat systematic order, but this he soon found to be quite impracticable. From a somewhat hasty scrutiny of the leading textbooks on gynecology, he finds that but scant mention is made of backache as a symptom, some authorities ignoring it entirely, while others dismiss it with a few words. English specialists give it greater prominence than do Americans. The neglect of this symptom may be due to the fact that it is of but little practical importance, one of those minor conditions which are so frequently overlooked in our attempts to discover something new and startling. To determine the significance of backache, therefore, he took the histories of 100 cases from his case-book, omitting all conditions of the vulva, vagina and bladder, when uterine, tubal or ovarian complications were absent.

His table stands thus:

Whole number of cases	100
Of these were:	
Unmarried	17
Married	83
Of the unmarried suffering from backache were	12
Of the married suffering from backache were	60

Twenty-three more of the married women had the backache occasionally, usually at the menstrual period.

The cases of backache in the unmarried were:

Inflammatory conditions of the uterus	9
Chloro-anæmia	2
Sub-serous fibroid	1
Total	12

In the married the causes of backache were more difficult to determine, since in hardly a single instance was the local condition simple, but usually consisted of several diseased states, inseparable.

In the married there were:

Anteflexion	10 cases.
Retroflexion	8 cases.
Retroversion	6 cases.
Laceration of the cervix uteri	22 cases.
Inflammatory conditions, uterus	45 cases.
Fibroids	5 cases.
Prolapsed ovaries	8 cases.

The cases of unmarried women who had no backache were found to present the following physical conditions:

Interstitial fibroid with anteflexion and prolapsed and adherent ovaries	1 case.
Anteflexion, associated with epilepsy	1 case.
Anteflexion, with dysmenorrhœa	1 case.
Anteflexion with endometritis, anæmia and ovarian hyperæsthesia	1 case.
Right lateral anteflexion with endometritis fungosa	1 case.
Total	5 cases.

It will be observed that in those who were subject to sacral pain, there are no displacements of the uterus noted, while in those who had no pain, in all five cases, there was an anterior dislocation of the womb. That this is not invariably the rule he states he can prove by other records, in which simple, so-called congenital, anteflexion is associated with the most distressing sacral ache.

The following conditions were found affecting the married women who had no backache:

Displacements of the uterus in 6 cases, viz. anteflexion, 3; retroflexion, 2; retroversion, 1. The ovaries were prolapsed four times, inflammatory conditions of the uterus were present in 16 cases, 1 case suffered from general debility and in 4 cases there were lacerations of the cervix uteri.

By comparing this last set of cases with

the first set (married) which suffered from backache, we see that the physical conditions presented in each are essentially the same, a preponderance of the patients suffering from some inflammatory condition of the uterus, from dislocation of that organ or from lacerations of the cervix. In very many of these cases a combination of these conditions were present. A number of the patients were anæmic and several were neurasthenic.

Backache was a prominent symptom in cases where only a slight cervical catarrh was present, and absent in others where graver pathological conditions existed. From this superficial study of a limited number of local conditions associated with backache, it is quite evident that these alone are not entirely responsible for the pain, but that some other factor must be present as the determining cause. This he believes to be a nerve state dependent upon either a congestion of the pelvic viscera, more especially of the uterus, or upon an opposite state of anæmia. In the first instance the nerves of the pelvis or uterus are pressed upon by the distended blood vessels, or the uterine muscular fibers, under certain conditions, perhaps themselves taking part in the pathological states present. In anæmia the backache would only represent a phase of the general condition, a symptom of the general nerve starvation. Certain it is that in these cases a one-sided treatment almost invariably fails to afford relief, and it is only after we combine general with local treatment that we succeed in curing the patient.

He suggests that sacral backache is always a symptom of local disturbance, but that as it is a symptom common to nearly all pelvic disorders, it cannot be considered as diagnostic of any particular functional or pathological condition.

OBSTETRICS.

THE PROTECTION OF THE PERINEUM DURING THE PASSAGE OF THE SHOULDERS.

Couder (*Archives de Tocologie et de Gynécologie*, No. 7, 1891) has found it of advantage to unfold an arm when the shoulders present with folded arms after the expulsion of the head. When a hand presents before the shoulders, it should be drawn down and the arm entirely delivered. When this is not possible, the hips of the mother should

be raised, and when the head has rotated externally, the head must be pulled down and the anterior arm freed to the elbow. The elbow is then to be flexed toward the back of the fœtus and the anterior arm entirely extracted. The head is then to be raised and the trunk allowed to emerge slowly.—*Amer. Jour. Med. Sci.*

DELIVERY OF THE SHOULDERS AND LACERATION OF THE PERINEUM.

Dr. Auvard (*Arch. de Tocol. et de Gynéc.*, Aug. 1891) differs from many obstetricians in his opinion as to the order in which the structures in the neighborhood of the shoulders are born, in labors where the head presents. The classical theory, at least in French schools since 1830, gives the order thus: (1) Escape of the prominence of the anterior shoulder (that which is turned towards the maternal pubes); (2) birth of the posterior or perineal shoulder and of the corresponding arm; (3) birth of the arm corresponding to the anterior shoulder. Dr. Auvard holds that the true normal order of birth, putting aside the action of great weight of the fœtus, is: (1) birth of the perineal shoulder and of the entire corresponding arm, whilst the anterior shoulder keeps fixed behind the pubes; (2) escape of the anterior shoulder and the corresponding arm. The circumference of the fœtus around its shoulders is greater than the circumference of its head, and the circumference of the fœtus around the elbows pressed against the trunk is yet greater; hence the perineum is in greater danger of laceration from the shoulders and disengaged arms than from the head. Therefore Dr. Auvard holds that in order to preserve the perineum, the arms must be disengaged before the birth of the trunk. If the hands are easily accessible, draw them down so as to bring out the corresponding arms. When neither hand can be reached, the head must be drawn aside so as to make the posterior shoulder project. The corresponding arm is next disengaged by pushing the humerus towards the back of the fœtus, and then drawing down the forearm. The anterior arm is delivered in the same way. If the posterior arm cannot be delivered first, the anterior must be brought down. In no case should the obstetrician leave the arms to be delivered pressed against the trunk, for this involves great danger to the perineum.—*Brit. Med. Jour.*

TRAUMATIC DETACHMENT OF THE PLACENTA.

Bogoroditzky (*Proceedings of the Tambow Medical Society*, Nos. 9, 10 and 11, 1890) reports the case of a healthy woman, twenty years old, in the fourth month of pregnancy, who, one night, "for amusement," threw a somersault in bed. Immediately after, she was conscious of pain in the abdomen, which moderated, and the woman fell asleep. On the next morning, however, she awoke with increased pain, a feeling of weight in the abdomen and general prostration. Soon there set in obstinate constipation (that did not yield to enemata or purgatives), violent vomiting, fever, dysuria and retention of urine. Two weeks later she appeared anæmic and collapsed; the pulse was quick and weak, the abdomen distended and tender, the uterus flabby, its fundus reaching about three fingers' breadth above the umbilicus, the cervix displaced backward, the os admitting a finger. Intra-uterine hæmorrhage being diagnosed, hot vaginal douches were given, an ice-bag applied to the abdomen, ice, stimulants and ergot administered. At the end of four hours a dead four-months' fetus was expelled; but the uterus remained as large as ever. On further examination, the organ was found to contain a smooth, globular body, of the consistency of the placenta. The membranes and placenta being ruptured, the finger entered an enormous cavity filled with an immense volume of fluid and clotted blood. After the removal of the membranes, clots and blood, the uterus contracted and hæmorrhage ceased. The after-treatment consisted in hot, disinfectant irrigations and the internal administration of ergot and quinine. Notwithstanding the formidable loss of blood, an excellent recovery followed. On the fourth day the temperature was normal; on the tenth day the patient got out of bed.—*Provincial Medical Journal*.

PEDIATRICS.

HYPODERMIC INJECTION OF MERCURY IN INFANTILE SYPHILIS.

Moncorvo and Ferreira have reported in the *Revue des Maladies de l'Enfance* (T. ix, pp. 241 and 289) the results of an extended series of trials of the subcutaneous injection of mercurial salts in the treatment of infantile syphilis. The preparations used were calomel, yellow oxide, *huile grise*, salicylate, and corrosive sublimate. Of these, the

huile grise and corrosive sublimate were found to be the most efficacious; neither gave rise to much pain at the time of injection, and there was little or no subsequent reaction. In making the injections, strict antiseptic precautions were observed. The treatment was exceedingly well tolerated, and in addition to the rapid amelioration of the cutaneous lesions and the somewhat slower disappearance of glandular enlargements, there was a very noticeable improvement in the general condition, as was evidenced by increase in weight and in the proportion of hæmoglobin in the blood. The dose of corrosive sublimate was 1 or 2 milligrammes; the ages of the children varied from 3 months to 14 years. The salt was simply dissolved in water. The dose of *huile grise* given is stated to have varied from "two-fifths to the whole of a Pravaz's syringe." The ages of the children ranged from 38 days to 12 years; the number of patients treated with the oil was 13; 5 were completely cured and 7 were much improved. The injections were repeated every third, fourth, or fifth day, according to circumstances. The authors consider that the hypodermic injection of one or other of these mercurial preparations should be a recognized form of treatment in congenital syphilis, and should be resorted to when an immediate and powerful effect is desired. [The following is the note on *huile grise* in Martindale and Westcott's *Extra Pharmacopæia*. "Injectio Hydrargyri Hypodermica.—Syn. Grey Oil. Mercury 3, lanolin 3, olive oil 4. Preferable formula: Mercury 39, mercurial ointment 2, vaseline oil 59. Dose, 1 to 2 grains daily."—*Brit. Med. Jour*.

THE SUSCEPTIBILITY OF CHILDREN TO HYPNOTISM.

Berillon (*Gaz. Méd.*, July 25, 1891), has found that out of every ten children, taken indiscriminately from every class in society, eight may be put to sleep (hypnotized) at the first or second trial. But the singular part of the subject is that children who have the most marked hereditary nervous taint are the most difficult to hypnotize. It has also been demonstrated that hysterical persons are only slightly susceptible of hypnotization, while epileptics are highly susceptible. Children without hereditary taint, who are active and vigorous, are usually hypnotized with facility. This author recommends that suggestion (hypnotization) be made use of in the treatment of such conditions as insom-

nia, night-terrors, kleptomania, onanism, and other vicious habits. If such practice is limited to ends which are strictly useful, and employed only for therapeutic purposes, it would appear free from danger and fruitful as to its results.

EYESIGHT—ITS CARE DURING INFANCY AND YOUTH.

Dr. L. Webster Fox, contributes a timely paper on this subject. In conclusion he formulates ten rules on the preservation of vision:

- (1) Do not allow light to fall upon the face of a sleeping infant.
- (2) Do not allow babies to gaze at a bright light.
- (3) Do not send children to school before the age of ten.
- (4) Do not allow children to keep their eyes too long on a near object, at any one time.
- (5) Do not allow them to study much by artificial light.
- (6) Do not allow them to use books with small type.
- (7) Do not allow them to read in a railway carriage.
- (8) Do not allow boys to smoke tobacco, especially cigarettes.
- (9) Do not necessarily ascribe headaches to indigestion, the eyes may be the exciting cause.
- (10) Do not allow the itinerant spectacle vendor to prescribe glasses.—(Paper read before the *Franklin Institute*, Phila.)

HYGIENE.

THE MECHANISM OF IMMUNITY FROM INFECTION.

Drs. Emmerich and Mastrbaum have published an interesting article in a German hygienic journal on the cause of immunity from infectious diseases and their treatment, especially of swine erysipelas, and a new method of protective vaccination for it. Emmerich published in the year 1886 his doctrine that the cause of immunity from infectious diseases is a modification of the chemical process going on in the cells, so that the new chemical compounds formed act as microbe killers without doing any harm to the cells themselves. In consequence of the results of a series of experiments, Emmerich concluded

that this antibacterial poison acts destructively on all the microbes within a few hours after their introduction into the organism. The publication of this doctrine having met with a good deal of opposition, he repeated his experiments, and again arrived at the same result, showing that the explanation of immunity from infectious diseases proposed in 1886 was justified. Granted the correctness of this, it follows that extracts from the tissue of any animal enjoying immunity are remedies against the corresponding infectious disease. Further experiments are now reported by Drs. Emmerich and Mastbaum which show that an extract from the various tissues and the blood of rabbits which have been made proof against swine erysipelas is an excellent remedy for the disease, and that a hypodermic injection of the extract can serve as a rational protective inoculation. A rabbit was inoculated by having injected into the posterior auricular vein the fifth of a cubic centimetre of a fresh broth culture of swine erysipelas, diluted with fifty times its volume of distilled water. In the course of the following week or two a series of hypodermic injections of the same liquid was administered. For the purpose of preparing a liquid extract suitable for therapeutic or prophylactic purposes, the organs of the rabbit were cut up and submitted to a pressure of from 300 to 400 atmospheres, and the expressed juice filtered into sterilized bottles. A large number of white mice as well as rabbits were now inoculated with the swine erysipelas, and at the same time, or very shortly afterwards, an injection of the liquid extract was administered to some of them. These remained alive, while all the others—that is to say, those which had not received an injection of the liquid extract of the organs of the infected rabbit—succumbed. Other experiments were carried out by which it was shown that this same liquid extract is capable of conferring immunity from the disease. Further experiments were made which showed that the bacilli were destroyed in six hours, and that in eight hours all were dead, or at least incapable of multiplication, but that the liquid extract produced extremely little effect upon the same bacilli outside the organism, so that the presence of living cells is evidently necessary for the destructive effect of the liquid extract to manifest itself. Another interesting result obtained was that bacilli taken fresh from the body were very much more active than their cultures in broth.—*Lancet*.

MEDICAL CHEMISTRY.**DERIVATIVES OF SALOL IN URINE.**

Lacroix (*Répertoire de Pharmacie; Bull. de Thérapeut.*, 1891, cxx, 284) calls attention to the fact that patients taking salol internally or using it externally pass a urine having the property of reducing certain metallic oxides (copper, silver and bismuth) just as is the case with diabetic urine. The examination with the saccharometer can also not be depended on, the rotatory power of these salol compounds being opposed to that of glucose. The author gives an optical and a chemical method for distinguishing between the two. After treating the urine with subacetate of lead, a test tube holding 15 cc. is half filled with the same; to this is added .05 gm. phenylhydrazin hydrochloride and .2 gm. pure acetate of sodium. The test tube is then heated to 100° C. (212° F.) on a water-bath for half an hour. The contents are then poured into some water and allowed to cool. The precipitate formed is examined with the microscope. Glucose gives a crystalline precipitate while the salol compound gives an amorphous one. The other method is as follows: 100 cc. urine are shaken with 1 gm. sulphuric acid and about 50 cc. pure ether; it is then permitted to separate. The upper layer, containing the derivatives of salol, is evaporated, the residue dissolved in water and a few drops of perchloride of iron are added to it. This would give rise to a violet color in case salol were present. The lower layer, after separation from the ethereal solution, is treated with subacetate of lead, filtered, and the glucose then estimated in the usual manner.

EXAMINATIONS FOR ADULTERATIONS OF TOMATO PRESERVES.

Capdeville (*Bull. de Thérapeut.*, 1891, cxx, p. 277) divides the analysis into an optical or microscopical and a chemical portion. The adulterations which are looked for by the first method are carrot and pumpkin, and this is done by comparison with sections of these vegetables. The chemical method takes cognizance of the presence of coloring matters such as eosin, cochineal and grenadin. For eosin: 5 gm. of the preserve are treated in a test tube with a mixture of 25 cc. of distilled water, 1 cc. ammonia and 25 cc. amyl alcohol. The mixture is then

filtered, and in case the filtrate is rose-colored, eosin is present which is also shown by the fluorescence. For cochineal: 5 gm. preserve are treated for 24 hours with 30 cc. alcohol of 95 per cent.; the liquid is then filtered and the alcohol evaporated on a water-bath. Should this residue, on treatment with ammonia, give a red color, cochineal is present. For grenadin: The preserve is treated with alcohol, the solution filtered and the filtrate evaporated to dryness. The residue is treated with water which dissolves the grenadin, and this aqueous solution is used for dyeing silk. Hydrochloric acid does not, while a solution of chloride of lime does, decolorize the silk even at ordinary temperatures.

NEWS AND MISCELLANY.**THE POLYCLINIC COURSE OF EVENING LECTURES**

Will be given on Tuesday and Friday evenings of each week, at eight o'clock, in the New Polyclinic Hospital, Lombard street, above Eighteenth street.

November 24—Dr. Edward Jackson—The Shadow Test.

November 27—Dr. B. Alex. Randall—Ear Diseases in General Practice.

December 1—Dr. S. D. Risley—The Diseases of the Choroidal Tract.

December 4—Dr. John B. Deaver—The Operative Treatment of Head Injuries.

December 8—Dr. Henry Leffmann—Recognition of Albumose and Peptone in Urine.

December 11—Dr. Edward P. Davis—The Use of the Forceps.

December 15—Dr. Henry Leffmann—Determination of Sugar and Urea in Urine.

December 18—Dr. S. D. Risley—The Diseases of the Choroidal Tract.

December 22—Dr. John B. Roberts—Fractures of the Elbow.

January 5—Dr. J. Henry C. Simes—Syphilis.

January 8—Dr. Lewis H. Adler, Jr.—The Physical Exploration of the Rectum.

January 12—Dr. Arthur Van Harlingen—The Contagious Diseases of the Skin; Their Diagnosis and Treatment.

January 15—Dr. John B. Deaver—The Radical Cure of Hernia; Umbilical, Inguinal and Femoral.

January 18—Dr. J. Henry C. Simes—Syphilis.

January 22—Dr. H. Augustus Wilson—The Mechanism of the Normal Foot with Reference to the Correction of Deformities.

January 26—Dr. Arthur Van Harlingen—The Antiseptic Treatment of Skin Diseases.

January 29—Dr. Lewis H. Adler, Jr.—Congenital Malformations of the Rectum and Anus.

February 2—Dr. E. P. Davis—The Treatment of Delayed Labor.

PERIODS OF GESTATION.

The periods of gestation are the same in the horse and ass, 11 months each; camel, 12 months; elephant, 2 years; lion, 5 months; buffalo, 12 months; cow, 9 months; sheep, 5 months; reindeer, 8 months; monkey, 7 months; bear, 6 months; sow, 4 months; dog, 9 weeks; cat, 8 weeks; rabbit, 4 weeks; guinea pig, 4 weeks; wolf, 90 to 95 days. Goose sets 30 days; swans 42 days; hens, 21 days; ducks, 28 days; pea hens and turkeys, 28 days; canaries, 14 days; pigeons, 14 days; parrots, 40 days.

DEATH IN THE JAM POT.

A correspondent of the *British Medical Journal*, in calling the attention to a danger that attends the use of glass jars for holding jam, writes: "Twice within the last two months have my children found pieces of glass in their mouths, and fortunately got it out again; one piece was half an inch long and very sharp. If this has happened twice in so short a time to me, how often must it occur to others, and how often must the children swallow a piece without knowing it? It makes one look back to the obscure case of enteritis one has met with, which could not be accounted for as to the cause. The jams my children had were from different makers, so the accident must not be uncommon."

THE COUCH.—A ROOM IS ONLY HALF FURNISHED WITHOUT ONE.

A room without a couch of some sort is only half furnished. Life is full of ups and downs, and all that saves the sanity of the mentally jaded and physically exhausted fortune fighter is the periodical good cry, and the momentary loss of consciousness on the upstairs lounge, or the old sofa in the sitting-room. There are times when so many of the things that distract us could be straightened out, and the way made clear, if

one only had a long comfortable couch, on whose soft bosom he could throw himself, boots and brains, stretch his weary frame, unmindful of tidies and tapestry, close his tired eyes, relax the tension of his muscles, and give his harassed mind a chance. Ten minutes of this soothing narcotic, when the head throbs, the soul yearns for endless, dreamless, eternal rest, would make the vision clear, the nerves steady, the heart light, and the star of hope shine again.

There isn't a doubt that the longing to die is mistaken for the need of a nap. Instead of the immortality of the soul, business men and working women want regular and systematic doses of dozing—and after a mossy bank in the shade of an old oak, that succeeding Junes have converted into a tenement of song birds, there is nothing that can approach a big sofa, or a low, long couch placed in a corner, where tired nature can turn her face to the wall and sleep and doze away the gloom.—*Exchange*.

NO MORE ARTIFICIAL TEETH.

Old age is robbed of half its terrors and much of its deformity by the brilliant discovery of a Moscow dentist, Dr. Zuamensky, who, according to a possibly over-sanguine Russian contemporary, has delighted the civilized world by his skill in making teeth grow in toothless gums. After experimenting on dogs, he tried the effects of his method in human beings, and the success was complete. The teeth are made of gutta-percha, porcelain, or metal, as may be desired. The root of the false tooth has some holes bored in it. Holes are now bored into the jaw, and into the hole the false tooth is stuck as is a nail in the wood. In a short time a tender growth starts up the cavity of the false tooth, and this growth hardening, the tooth becomes fixed in position. These new teeth can, according to the inventor, be placed in the alveolus of a natural tooth, and thus, when a diseased tooth is pulled out a metal or porcelain substitute can be inserted in its place, without incurring any risk of transferring disease, as happened in Hunter's days, when the apparently sound teeth of poor persons, when transplanted, not infrequently conveyed disease. There are several minor inconsistencies in this statement, but it would be ungracious to look such a noble gift in the mouth, especially as, according to dentists of authority, our race is destined eventually to become edentulous.—*Medical Press*.